

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

Vol. 60
No. 15

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In This Issue:

Mutuality of Railroad and Industrial
Interests in Material Development.

Louisiana Sugar Industry and Tariff
Agitation.

Splendid Exhibit of West Virginia
Horticultural Potentialities.

Cheap Power Essential to the
Progress of Civilization.

Alphabetical Index, Page 130.
Classified Index, Pages 124 to 129.
Classified Opportunities, Pages 86, 87 and 88.

BALTIMORE, OCTOBER 19, 1911

B. t. u. THE MEASURE OF HEAT

The term British thermal unit (abbreviated B. t. u.), often confronts the user of coal. As a yard stick is a measure of length, a B. t. u. is a measure of heat. The total amount of heat contained in a pound of fuel, all of which is liberated by complete combustion, is expressed in B. t. u's. A single heat unit is the amount of heat required to raise the temperature of one pound of water one degree Fahrenheit at atmospheric temperature. Heat units make steam and steam makes power.

Below are tabulated, from some of the highest scientific authorities, the heat values of the commoner combustibles contained in coal:

SUBSTANCE	B. t. u. Per Lb.	
Acetylene Gas	21,465	Included in the "Volatile Matter" of proximate analysis.
Marsh Gas	23,515	
Olefiant Gas	21,345	
Hydrogen Gas	62,035	
Carbon	14,450	"Fixed Carbon" of proximate analysis.

CLINCHFIELD COAL IS HIGH IN HEAT VALUE

Clinchfield coal is rich in Hydrogen and the Hydro-Carbon gases shown above. These "VOLATILE" gases burn above the fuel bed with rapidity and great intensity in close proximity to the boiler surfaces. Quick liberation of heat units means quick generation of steam; hence the economy in using Clinchfield coal which maintains boilers at high capacity easily and continuously, thus delivering more than the rated horsepower. Clinchfield coal ranges from 14,000 to 14,700 heat units per pound, because it contains small percentages of oxygen, moisture and ash, which are valueless, and large percentages of the combustibles highest in heat value.

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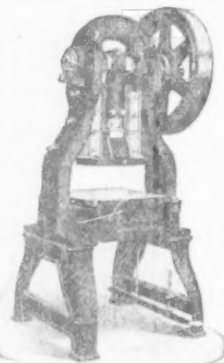
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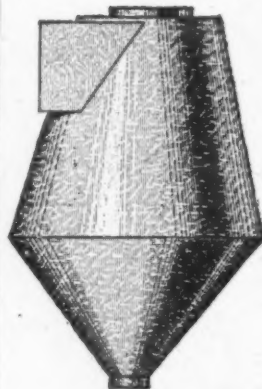
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Catalog 34

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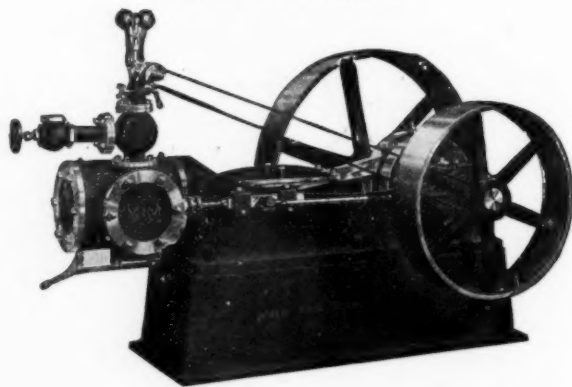
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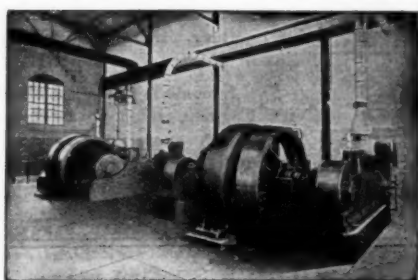


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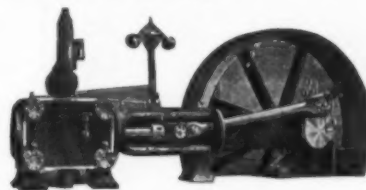
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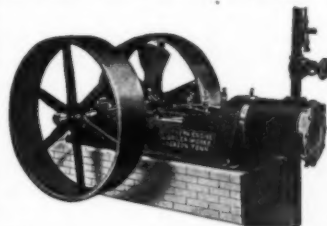
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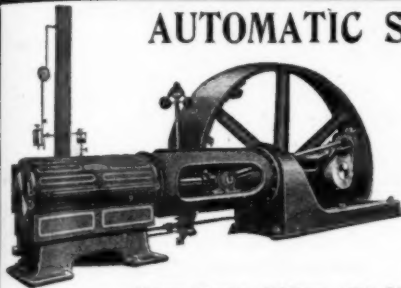
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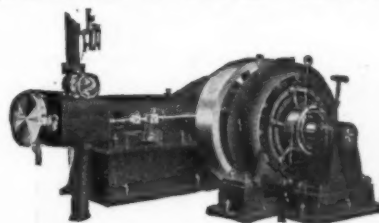
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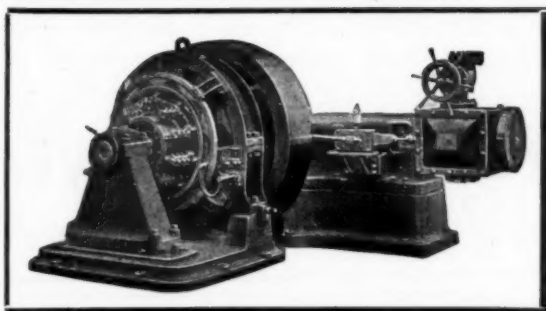
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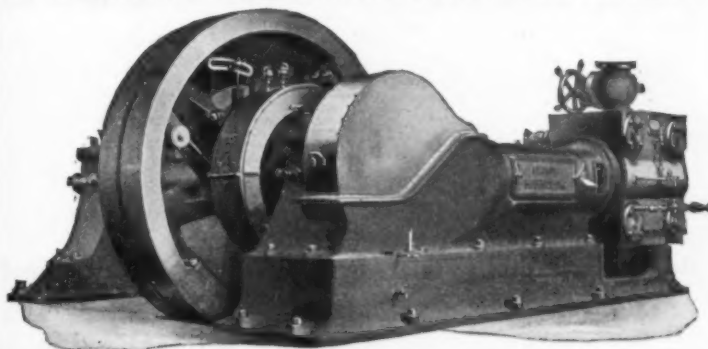
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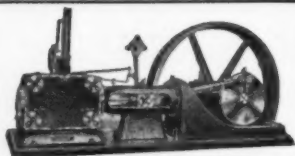


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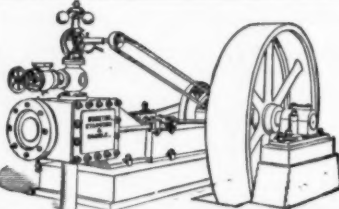
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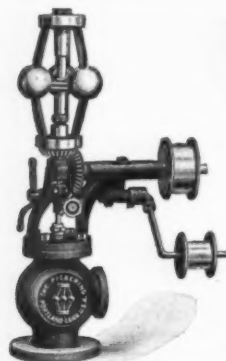
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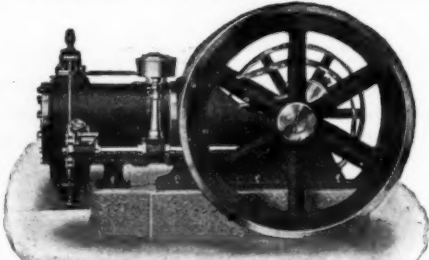
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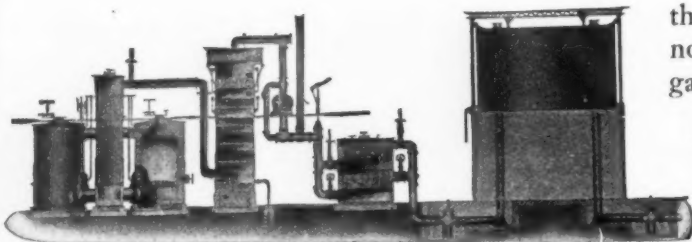
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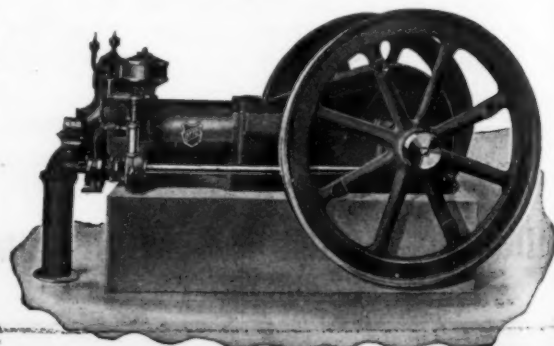
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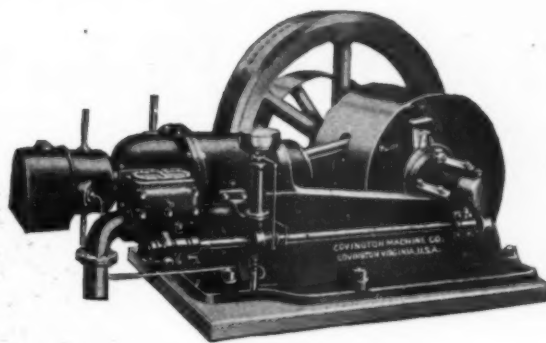
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COVINGTON OIL ENGINES

insure cheap power on light, fluctuating or full load. Fuel consumption ceases absolutely when the engines are shut down.

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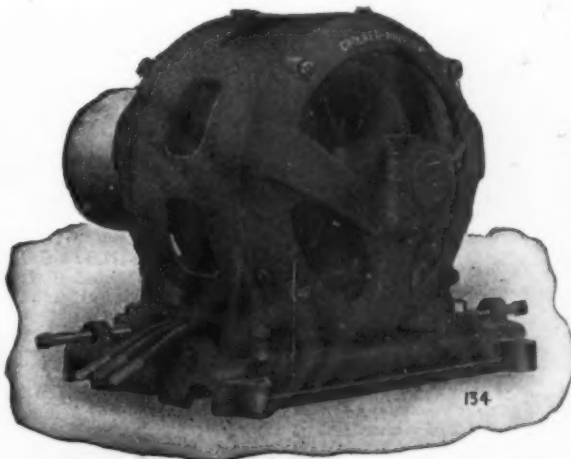
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Write for bulletin 126-J.



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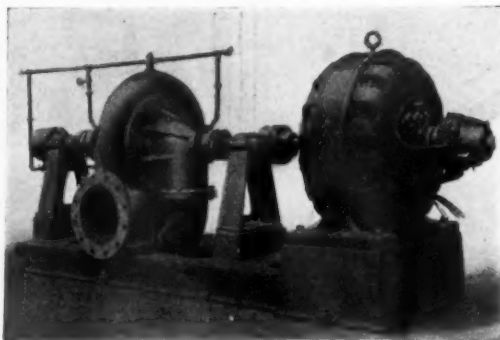
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"SAVE TIME AND FREIGHT"



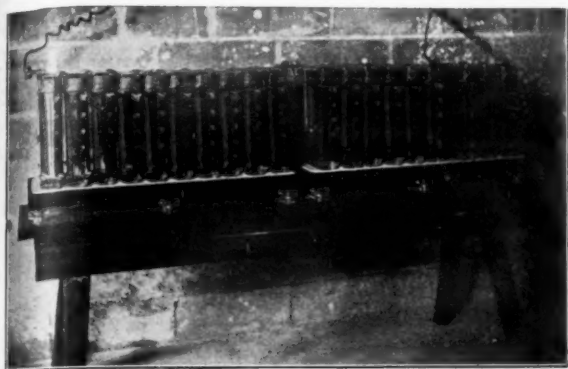
"TELEPHONE OUR NEAREST HOUSE"

"SAVE TIME AND FREIGHT"



"TELEPHONE OUR NEAREST HOUSE"

The Use of a Storage Battery in Electric Lighting Plants



Battery of Type ET "Chloride Accumulator" Cells

The chief purpose of a storage battery for Electric Lighting Plants is to furnish steady, continuous, twenty-four-hour service without the necessity of running an engine and dynamo all of the time.

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The "Chloride Accumulator"

furnished with the small electric lighting plants of this company is the same type of battery as is used by the large electric lighting companies, electric railways, telephone and telegraph companies. This is the best assurance of dependable lighting service. The storage battery is simple to install and very easy to care for and operate, as it requires very little attention.

If your home or factory is not near a public electric lighting station, you can now have electricity at very small expense. Write our nearest office for our book "Small Electric Lighting Plants."

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PHILADELPHIA, PA.

1911

New York

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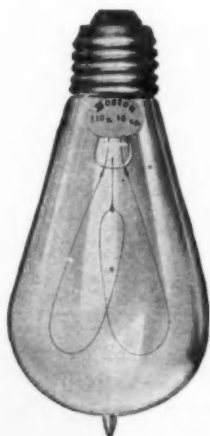
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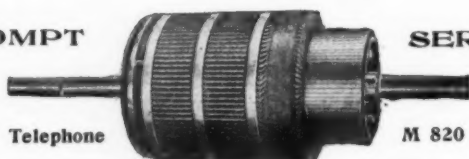
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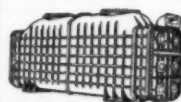
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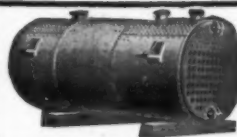
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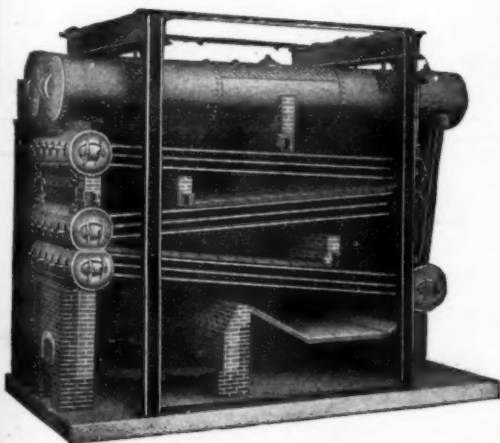
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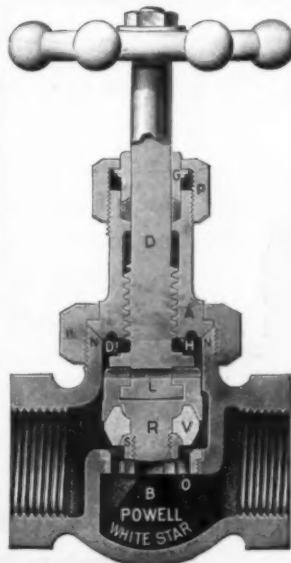
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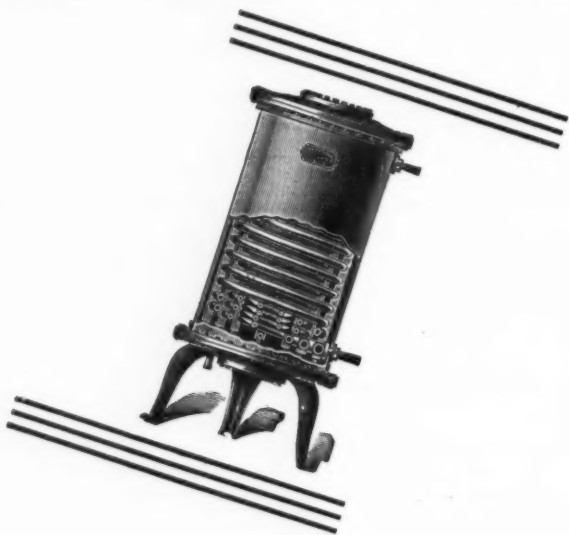
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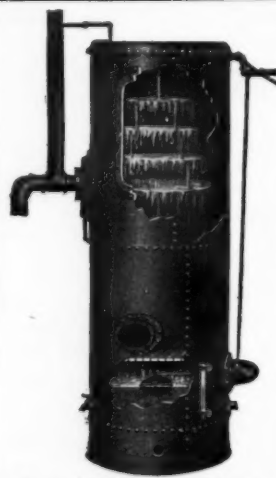
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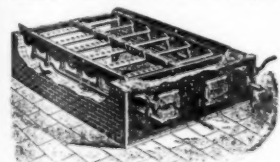


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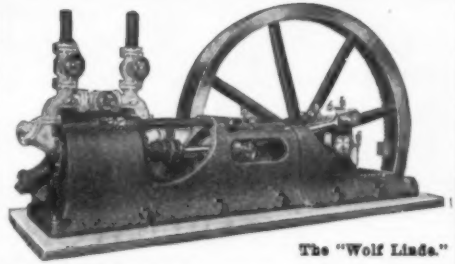
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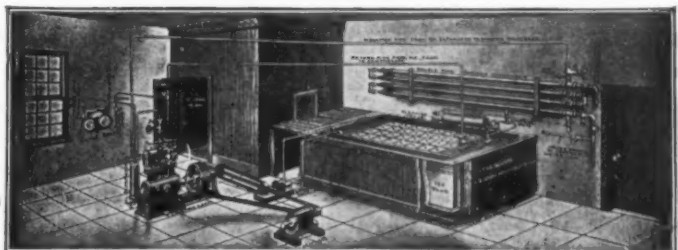
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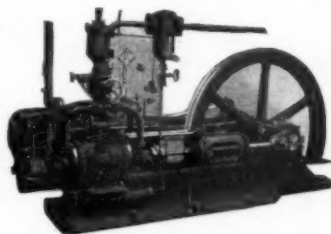
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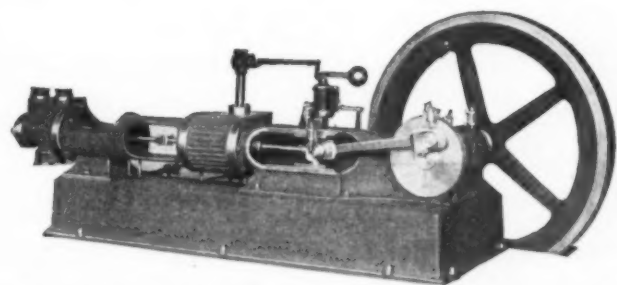
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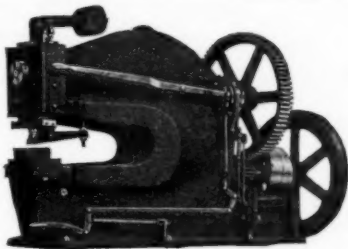
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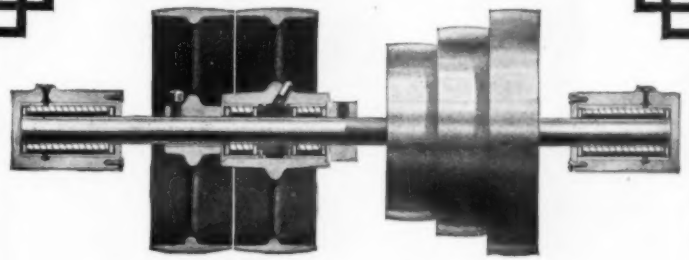
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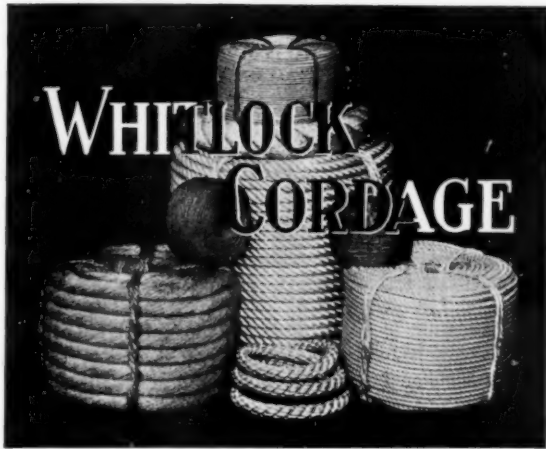
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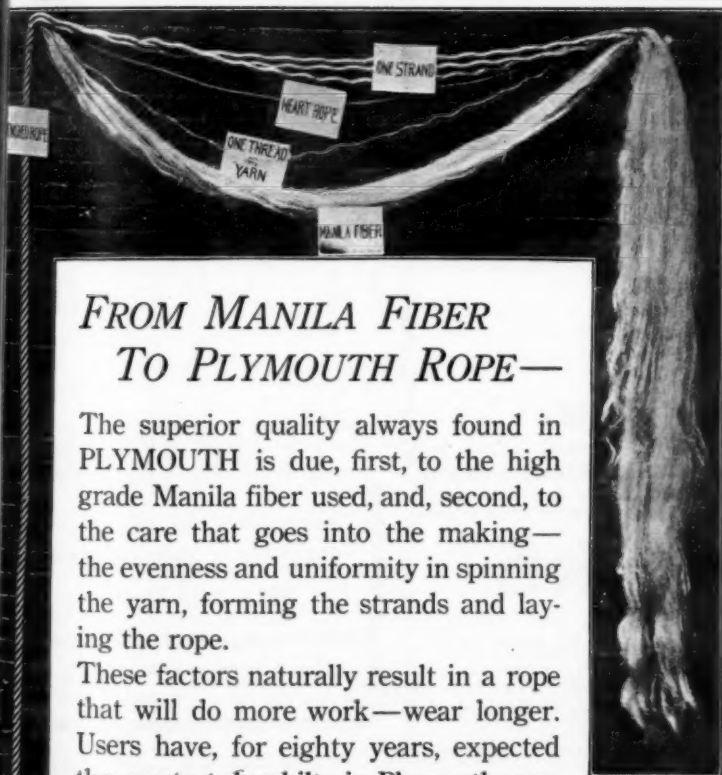


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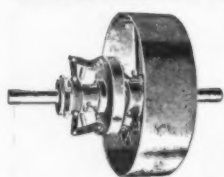
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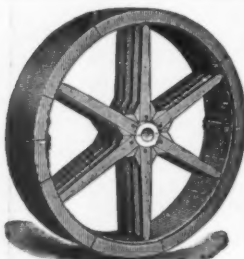
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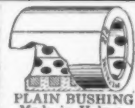


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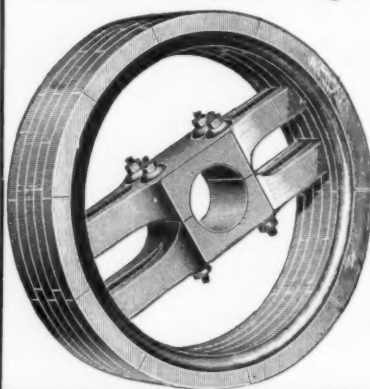
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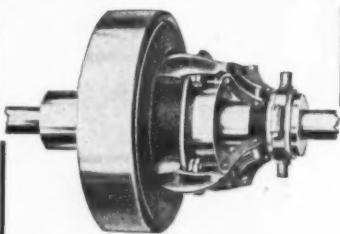
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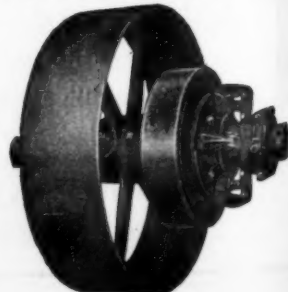
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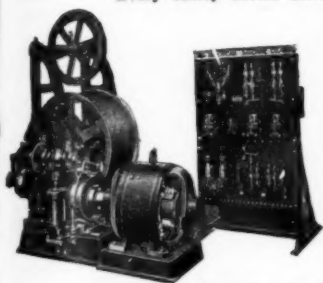


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Can be used on any kind
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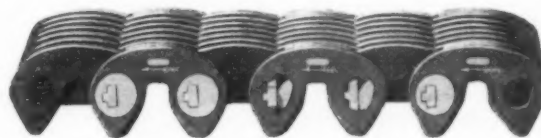
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99% Efficient — 1-4 to 3000 H. P.

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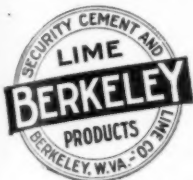
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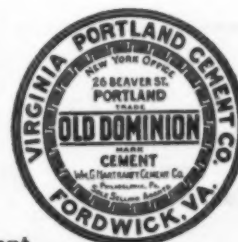


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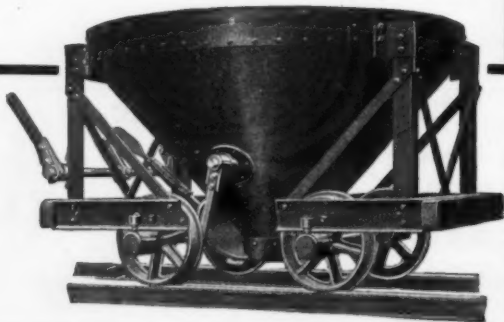
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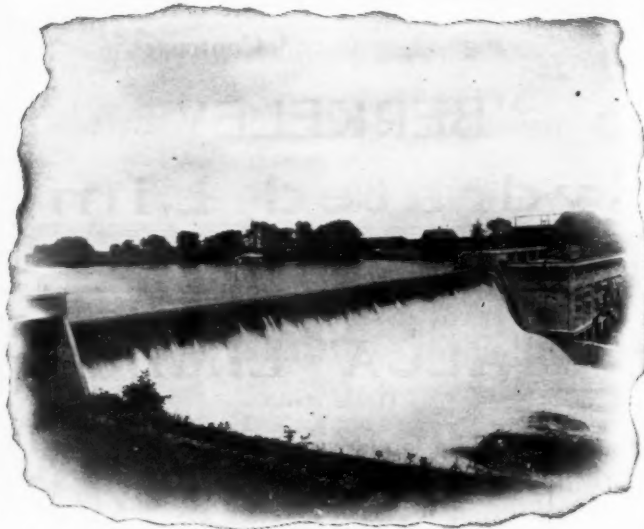
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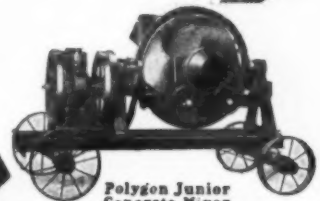
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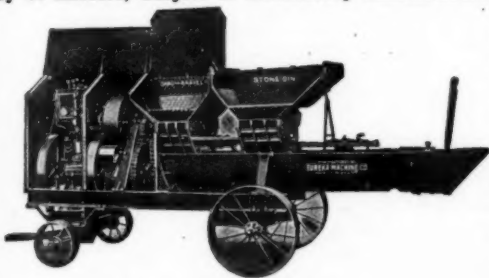


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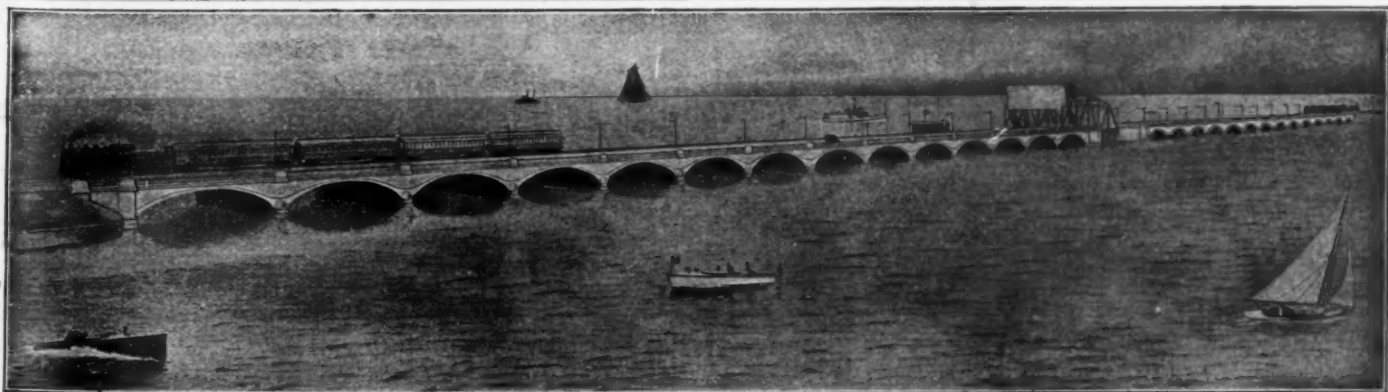
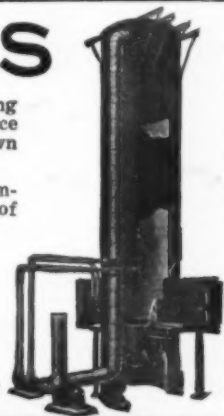
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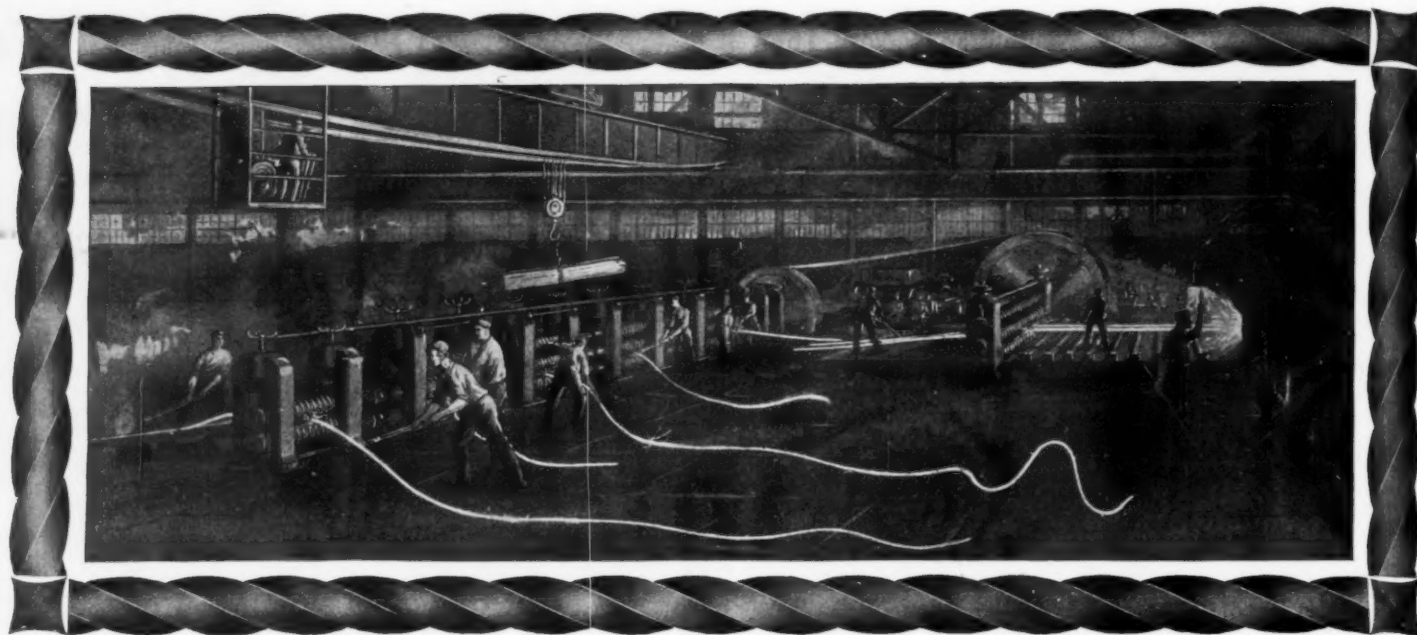
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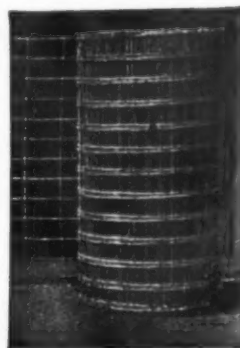
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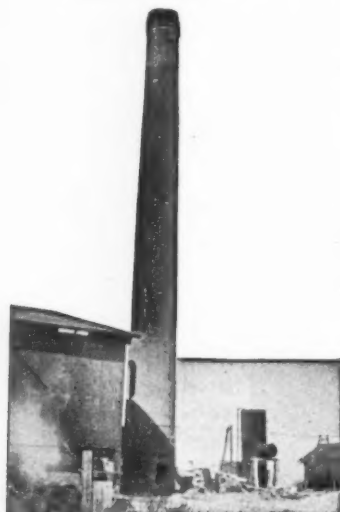
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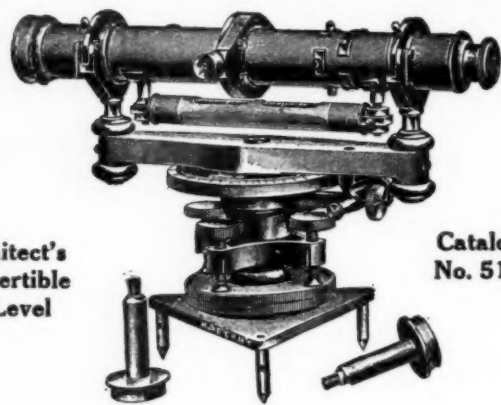
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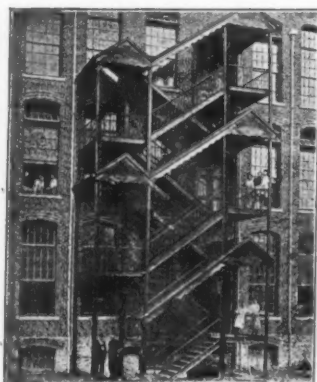
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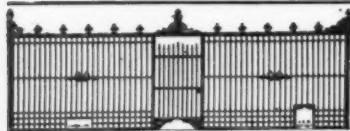
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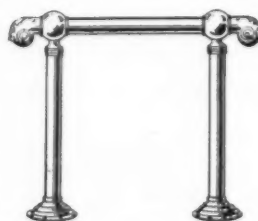
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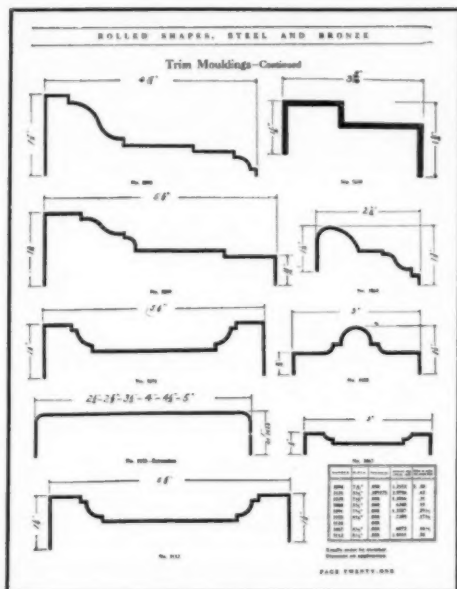
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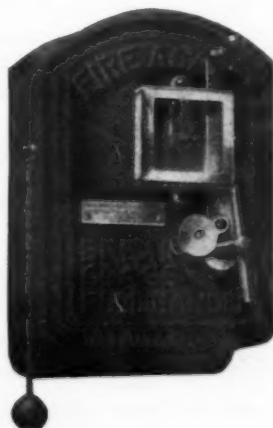


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"Were I to Build

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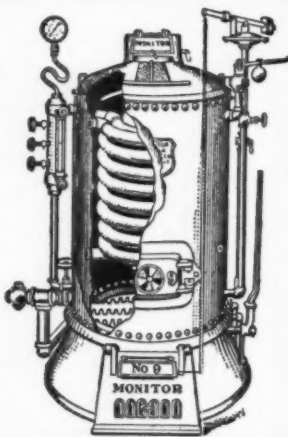
So wrote E. S. Hessler, merchant of Warnersville, Pa., after eight years' use of a Monitor Boiler No. 7.

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We have just issued a catalog on
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The "Star" Ventilator, Fire Retarding Model "A"
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And our recently developed
"Star" Light and Vent Structure

Please note in the opening pages of this new catalog we make reference to the fact that it would be impossible for us to illustrate all the buildings, up to date, on which "Star" Ventilators have been applied. It would require space many times larger than the entire booklet.

As an example, in a recent issue of the "Metal Worker" a ventilator manufacturer makes a point of the fact that he has supplied one concern with the 19th order, and this same concern has actually purchased from us and installed—their last contract being of recent date—over a hundred such contracts, so the public will please understand how impossible it is for us to publish the fact that we have received an order from "such and such" a concern.

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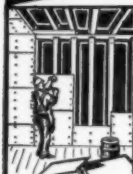
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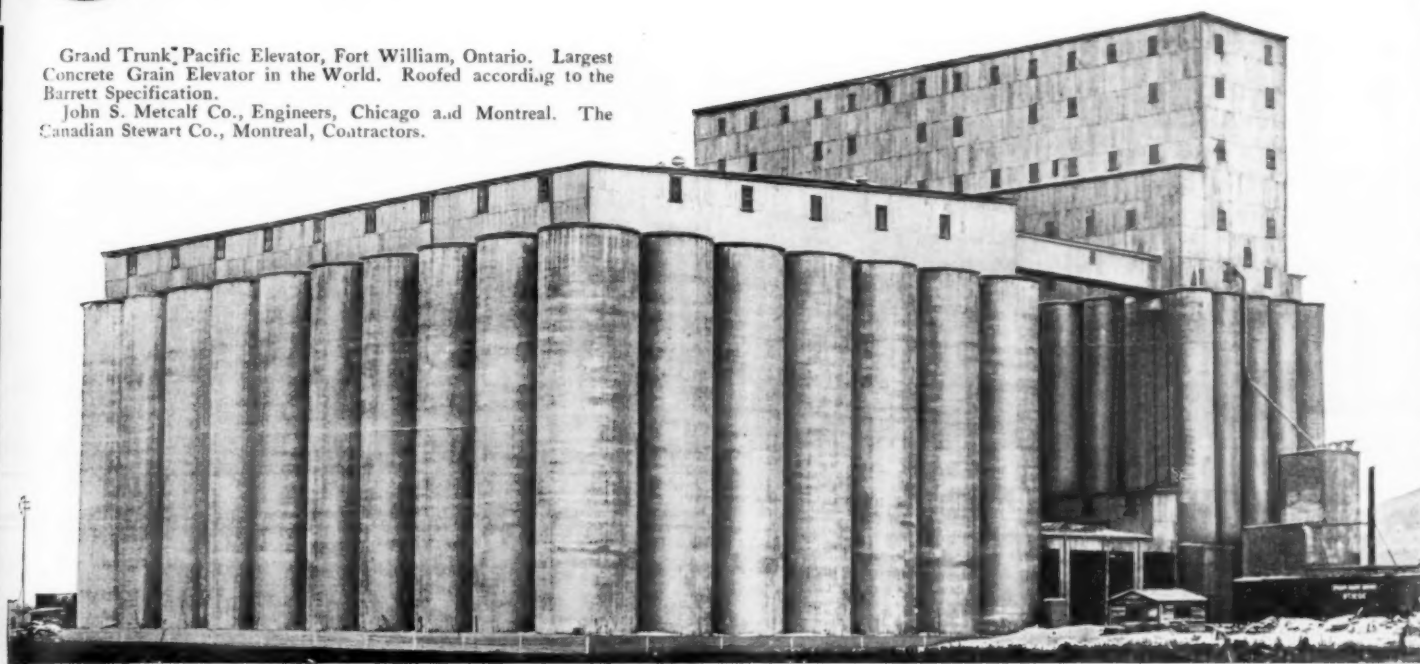
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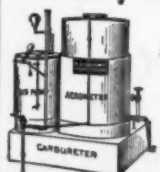
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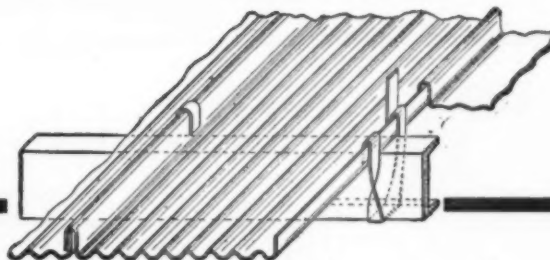
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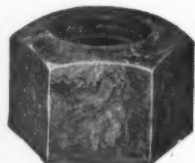
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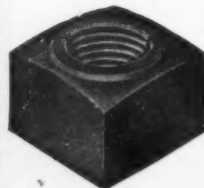
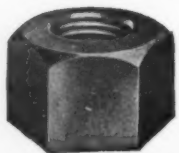
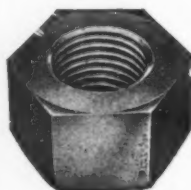
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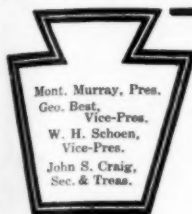
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Malleable Iron Castings of Highest Quality

Annual Capacity 25,000 Tons.

Castings of all descriptions furnished.

Send Blueprints or Samples for Estimates.

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EAST ST. LOUIS, ILL.**

DROP FORGINGS

DROP FORGINGS EXCEL STEEL CASTINGS

in strength, finish, absence of blow-holes and cracks, and they cost
only about one-half as much. Let us quote competitive prices.

We make any kind, and make them right.

RICHMOND FORGINGS CORP., (Acce), RICHMOND, VA.

CRUCIBLE STEEL CASTINGS

From 1 to 2000 lbs. Special Die Steel. Vanadium Steel and Monel Metal.

Steel made in the Crucible

Especially adapted to castings subject to extensive machine work.

RIVERSIDE STEEL CASTING CO. NEWARK, N. J.

C. G. HUSSEY & CO.

Pittsburg Copper & Brass Rolling Mills, **PITTSBURGH, PENNA.**

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Sheets, Plates, Rivets, Bars, Nails, Conductor Pipe, Eaves, Trough,
Elbows, Shoes, Ferrules.

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You may be making the "very best ever" in
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mills, factories, foundries, railroads, etc., but
to sell your products you've got to advertise.
If you want to sell to the South, use the recog-
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THE ELECTRO-CLOCK



LAST FOREVER FIREPROOF STEEL CASE

It never varies and is just the clock
for railroads, manufacturers and other
firms requiring absolutely accurate
time. Needs winding only once every
eighteen months. Let us tell you
about it.

THE ELECTRO-CLOCK CO.

116 Mercer Street, **BALTIMORE, MD.**



The Symbol of Quality

This trade mark on milling
machinery is a guarantee of
the best and most reliable
service, combined with
qualities insuring the great-
est economy of power and
operating cost. A complete
line of

*Flour Mills—Rice Mills—Corn Mills
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NORDYKE & MARMON COMPANY

America's Leading Mill Builders

1833 W. MORRIS STREET Established 1851 **INDIANAPOLIS, U. S. A.**

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Manufacturers of FLOUR AND CORN MILL MACHINERY, WOOD SPLIT AND IRON PULLEYS,
RING OIL HANGERS, COUPLINGS, GEARINGS, COLLARS, Etc.

Shafting, Belting, Mill and Elevator Supplies in Stock.

Roll Corrugating a Specialty.

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"STAR" MILLS

Equipped with

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make the old-fashioned

"WATER GROUND TABLE MEAL"

Write for prices and discount

B. F. STARR CO., Baltimore, Md.

Lynn-Superior Double Mixers

Best designed and most efficient mixing
principle for thoroughly mixing



Dry Feeds,
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Material.
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Cattle Feeds.

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Built with or without steam jacket for
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Write us for any special Mixing or
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In Roofing Slate, Slate Blackboards,
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We Build Good Mills

All our time and thought is
devoted to this work, and
the mills we build are the
very best that money can
buy.

**We allow you to buy
machinery on trial**

and if they do not do the
work intended, or for any
reason whatsoever they do
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turned.

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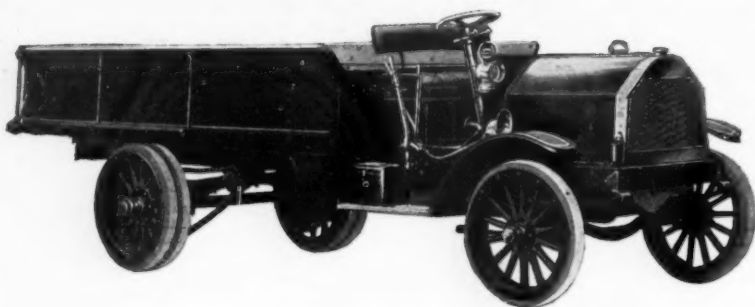
THE WOLF COMPANY
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Wire Stapling Machinery

For Fruit Packages, Baskets, Crates,
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Curragated Joint Fastener Driving
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SARANAC MACHINE CO.

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The Truck With The Pocket Book Appeal

Not alone the advertising value to your business, the speedier delivery, the satisfaction of putting your trucking on a scientific basis, but the actual saving in dollars and cents over horse-drawn vehicles every day the Schacht serves you. The real secret of Schacht supremacy in trucking lies here—to haul your goods at a far lower rate per ton mile than horses. Few other trucks can equal the quality and economy of Schacht service. An investigation of the Schacht now means the wisest placing of your truck investment.

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The name Schacht has never been placed on a truck that did not have superabundance of strength for the work in hand. That means long life, elimination of hundreds of little repairs required for the ordinary truck, more mileage on the same amount of gasoline and oil. No time lost by breakdowns or by stops for adjustments. A practical, hard-working, enduring "fool-proof" truck that may be safely and economically driven by the man who is driving your horses today.

If you're interested in a "service" truck built to fit your individual needs, we'll be glad to furnish facts at your request. Write us.

Schacht Motor Car Co.

2850 Spring Grove Ave., Cincinnati, O.

Model 21, 3 to 4 Tons, Chassis, \$2900, with body as Shown in Cut, \$3000.

Motor 40 H. P., 4 Cylinders, 4 1-2 x 5 Inches, Cast En Bloc.

Selective Sliding Gear Transmission, 3 Speeds Forward and Reverse.

Timken Axles.

Roller Bearings in Wheels, Jack Shaft, Steering Knuckle and Transmission.

Speed, 14 Miles an Hour on Direct Drive.

Tires 36x4 Inches Single Frost, 36x4 Inches Dual Rear.

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Wilmington Iron Works
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Phosphates, Slag, Coal, Marl, Clay, Etc.

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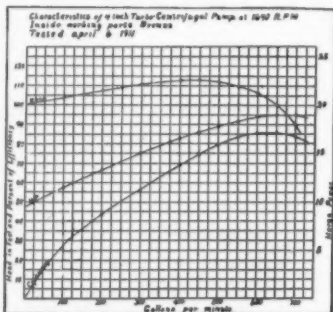
ATLANTA, GA.—Hancock-Holmes Foundry and Machine Works

SPRAGUE

CANNING MACHINERY COMPANY.

222 N. WABASH AV. CHICAGO, ILL.

In This Test A Hayton 4" Turbo-Centrifugal Pump Showed an Efficiency of 85%



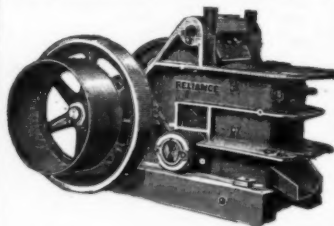
This test shows that Hayton Turbo-Centrifugal Pumps operate with an efficiency that cannot be equalled with either centrifugal or plunger pumps. The Hayton Turbo-Centrifugal pump will maintain its theoretical head when pumping approximately at full capacity.

We make a point to submit actual running tests of Hayton Pumps for approval before shipment. We will then guarantee the pump to operate as the test claims it will. Let us mail you our 16-page bulletin.

Send us your name and address.

HAYTON PUMP CO., - QUINCY, ILL.

Reliance Crushers



Noted for Economy, Efficiency and Service.

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Best route to Florida, Cuba and the South. Fine steamers. Excellent service. Low fares. All steamers equipped with wireless.

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CASH PAID FOR MACHINERY and METALS

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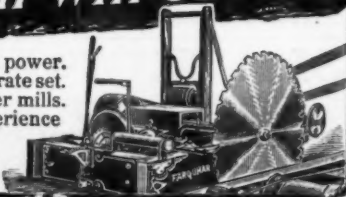


A Farquhar Will Cut It.

Cuts faster. Uses less power. Portable—easy to set up. Absolutely accurate set. Quick return. One half the parts of other mills. The perfected sawmill of 56 years experience.

Get our big, new catalogue on Sawmills, Steam Engines, Boilers, and Mill Equipments.

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Don't fail to buy from advertisers in the MANUFACTURERS RECORD as they are the most representative firms seeking Southern business.

Don't forget to mention the MANUFACTURERS RECORD when writing to them.



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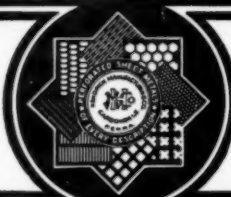
for Phosphate Mines, Cotton Seed Oil Mills, Railroad Supplies, Sugar Mills; also Screens for Coke, Rock, Coal, Ore and all other purposes.

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Perforated
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NEW YORK OFFICE
ROOM 1017 COSTLANDT BUILDING

Automatic
Improved

DRYERS

Economical—Efficient
Great Capacity
American Process Co.
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New York.

C.O. BARTLETT AND SNOW CO.

MAKERS OF CLEVELAND, O. U.S.A.

DRYERS CATALOG N° 16

GRADERS CATALOG N° 27

ELEVATORS AND CONVEYORS.

Pay 17 Cents a Day and Own The Printype Oliver Typewriter

IMPORTANT: The introduction of the Printype Model came as the climax to our great advertising campaign in which we offered The Oliver Typewriter No. 5 on the 17-Cents-a-Day Purchase Plan. For months past we have devoted all our advertising announcements to the new Printype Oliver Typewriter, with its revolutionary improvement in typewriting type.

The impression has gained ground that the 17-Cents-a-Day Purchase Plan does not apply to the Printype Model. In some instances the idea prevails that we can even charge extra for The Oliver Typewriter equipped with Printype.

We desire to state with all possible emphasis that The Printype Oliver Typewriter can be purchased on the "17-Cents-a-Day" Plan at the regular price of \$100.

The Machine That "Typewrites Print!"

America rings with praise for The Printype Oliver Typewriter—the first writing machine that successfully TYPEWRITES PRINT!

This remarkable machine combines all the operative conveniences, all the practical improvements of the most highly perfected typewriter, with the type that from time immemorial has been used for magazines and books!

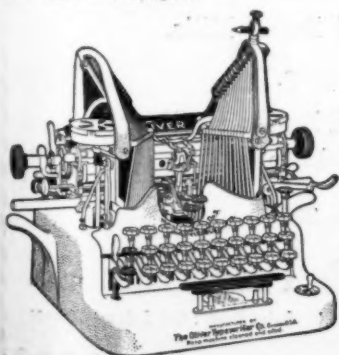
It is infinitely superior to the old-style, thin outline Pica typewriter type—a fact which none will deny. It ranks in importance with visible writing, which the Oliver introduced.

The preference of typewriter buyers is so overwhelmingly in favor of Printype that already over 70 per cent. of our total output are "Printypes."

The advantages of Printype are self-evident. The story is told at a glance. Its beauty, its symmetry, its clearness and character lend a new distinction to typewritten correspondence.

Printype Increases Speed

Not only does Printype enhance the artistic appearance of typewritten matter, but it enables the operator to attain greater speed, as the type is so easy on the eyes. It relieves the tension on the nerves and thus gives wings to the fingers.



The OLIVER Typewriter

The Standard Visible Writer

With all its commanding advantages from a purely mechanical standpoint, and its new artistic triumphs, its supremacy is unquestioned. Its simplicity, versatility and extreme durability all revolve around the great basic feature—the Oliver Double Type-Bar.

Without this Double Type-Bar the successful use of Printype would be absolutely impossible.

"17-Cents-a-Day" Plan

This machine—The Printype Oliver Typewriter—offered on the famous "17-Cents-a-Day" Plan—has all the improvements, all the exclusive features which our experts have developed. It has the Vertical and Horizontal Line-Ruling Device, the Disappearing Indicator, the Back Spacer, the Tabulator, the Adjustable Paper Feed, the Double Release, the Automatic Spacer, the Locomotive Base and many other innovations which contribute to high efficiency. It operates with the lightest touch and, of course, writes in sight.

Why Don't You Write Us Today?

How can you resist the attractions of "Printype" and the appeal of the "Penny Plan?"

Here is the world's greatest writing machine—The Printype Oliver Typewriter—the standard visible writer—the regular \$100 machine—actually offered for pennies!

A small first payment brings The Printype Oliver Typewriter. Then you save 17 cents a day and pay monthly.

Your request will bring the special Printype Catalog, the details of the Penny Plan and a letter written in Printype. Whether you are "Commander-in-Chief" of a business or a private in the ranks, you will be greatly interested in the literature we will send you.

The Oliver Typewriter Company
12 East Fayette St., Baltimore, Md.



This Kelly Motor Truck

is delivering three times the service obtainable with horse-drawn trucks and saving its owners 25 cents a ton, doing it.

Read what the users of this truck write to a prospective motor truck buyer

THE DALZELL BROTHERS CO., Youngstown, Ohio.

Gentlemen:—Our truck is a three-ton truck, and while we do not always load it to capacity, we often load it as high as four tons.

Our plant is about 6½ miles from the heart of Kansas City, and we are able to make three trips to the city and back, with ease, whereas we were only able to make one trip a day with teams.

Kansas City is very hilly, but we have never found a place that we could not reach with the truck.

Taking into consideration all cost in connection with the truck, including repairs and liberal depreciation, we are able to deliver our goods 25 cents a ton cheaper than we could with teams.

KANSAS CITY STRUCTURAL STEEL CO.

(Signed) NEIL G. LILLY, Secretary and Auditor.

This is a single instance, from a representative industry, of the character of letters we receive every day from users of Kelly Motor Trucks in almost every industry.

There are Kelly Motor Trucks in service today that have been in continuous service for five years.

The per ton mile operating cost of Kelly Motor Trucks is lower than that of any other trucks made in America or Europe—as was substantially proven, three times running, in the great motor truck contests at Philadelphia, Boston and New York.

Write us today for full particulars of Kelly Motor Trucks as related to your particular line of business. Ask us also to put you in touch with the nearest Kelly Motor Truck agent.

THE KELLY MOTOR TRUCK COMPANY,
238 Burt Street, Springfield, Ohio.

TEAR OFF THIS COUPON

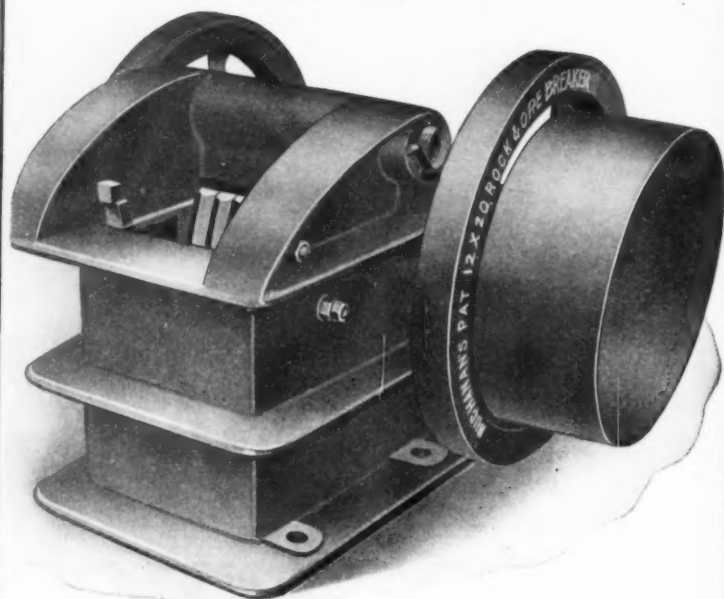
THE KELLY MOTOR TRUCK CO.
238 Burt St.
Springfield, Ohio

Gentlemen:
Please send me complete details regarding Kelly Motor Trucks.

Name.....
Address.....
Kind of business.....

Buchanan All Steel Crushers

STYLE B ILLUSTRATED



Made in nine sizes, 4" x 10" to 24" x 36".
Adjustable Jaw Stroke—Shim Adjustment.
Reversible Toggle Bearings—Deep Frame.
Manganese Steel Jaw and Cheek Plates, reversible.
Style C in eight sizes, 24 x 48 to 60 x 96.

GEO. V. CRESSON CO.
POWER TRANSMITTING MACHINERY

Buchanan Crushing Rolls and Magnetic Separators

PHILADELPHIA: 18th St. and Allegheny Ave. NEW YORK: 90 West St.

SINGLE ROLL CRUSHERS

FOR ROCK PHOSPHATE AND LIMESTONE

Capacity, 10 to 200 tons per hour for Coarse and Medium Fine Product

ORE WASHERS, JIGS, ELEVATORS, CONVEYORS, Etc.

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McLANAHAN-STONE MACHINE CO., HOLLIDAYSBURG, PA.

The Mecklenburg Iron Works

Will be glad to answer all correspondence from parties who need or expect to need

**Machinery for Handling
GOLD, IRON OR COTTON,**

as they have been manufacturing such machinery for thirty years, and can give entire satisfaction. Their address is

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M. I. W.

FROM CORK to CORUNDUM GARDNER CRUSHERS

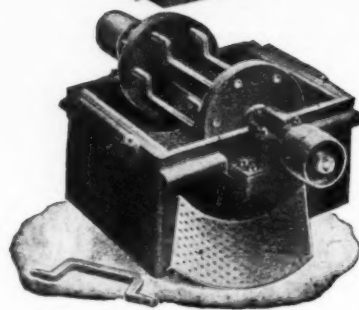
Have Widest Range and Are the Best



Grind Wet or Dry. Any desired fineness. Especially adapted for Phosphate and Cement Rock, Coal, Oyster Shells, Silex, etc.

Tell us your Pulverizing Problems.

Send us a sample of the material you wish ground.



Let us show you just what the GARDNER will do

Most Economical in Cost and Maintenance

Ask for Catalogue.

GARDNER CRUSHER CO.

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PULVERIZING MACHINERY

of every description

THE J. R. ALSING ENG. CO.

Ask for Catalog "M"

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THE NEW JERSEY WIRE CLOTH CO.

Manufactures



WIRE CLOTH

WIRE LATHING

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Our Extensive Facilities Enable Us to Execute Large Orders Promptly at Low Prices

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BARK AND CHIP SHREDDERS

WILLIAMS PATENT HAMMER TYPE

For Tanneries, Extract Plants and Paper Mills.

Chip Shredders and Rechippers.

Will handle Chestnut Oak, Oak Chips, Oak Bark and all wood used for Extract or Wood Pulp.

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THE NEW WILLIAMS

1700 Machines Now in Use.

The Williams Patent Crusher & Pulverizer Co.

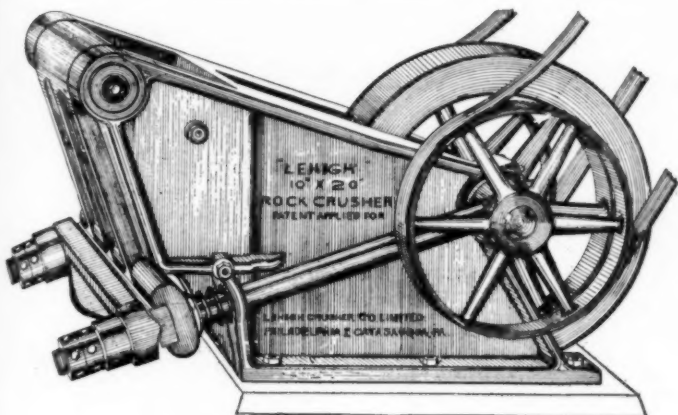
Works: 2701 N. Broadway, St. Louis, Mo.

San Francisco Office: 428 Monadnock Bldg.

Sales Dept.: Old Colony, Chicago

The LEHIGH Rock and Ore Crusher

is the result of successful practice and experience
in designing and building crushing machinery.



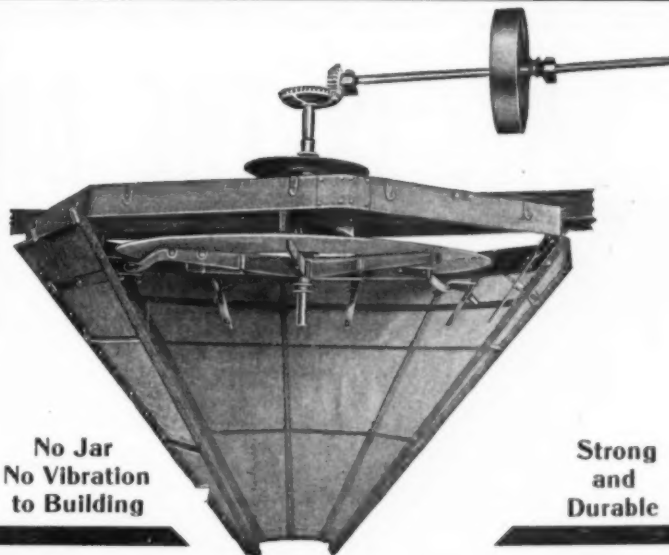
The Lehigh Crusher is designed to meet simplicity in construction, maximum power from the least applied power, rigidity in design, economy in maintenance, maximum output, and the obtaining of the desired size of product with the minimum amount of adjustment.

We will be glad to take up with you any questions involved in the rapid and economic crushing of Rock, Stone, Phosphate, Ore, or similar materials, and the economic handling of same.

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LEHIGH CRUSHER CO., Limited

NEW SALES OFFICE AND WORKS—CATASAUQUA, PA.



The Ogle Patent Octagon Screen

CAPACITY.	
No. 1 Screen.	No. 2 Screen.
Ground Phos. Rock.....	7 to 8 tons per hour.
Acid Phosphate...50 tons per hour.	25 tons per hour.
Ammoniated Goods...60 tons per hour.	30 tons per hour.
Mixed fertilizers...60 tons per hour.	30 tons per hour.
Abattoir Tankage...30 tons per hour.	15 tons per hour.
Sand.....40 tons per hour.	20 tons per hour.
Cinder and Quartz...20 tons per hour.	10 tons per hour.
Cement Rock.....30 tons per hour.	15 tons per hour.

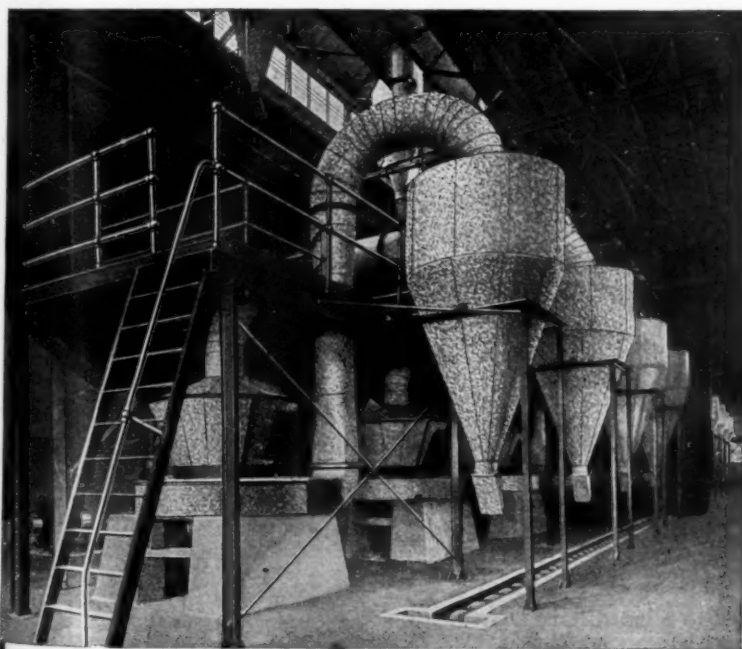
SIZES.

Diameter No. 1 Screen, 10 feet. Length of Trays, 7 feet 3 inches.
Diameter No. 2 Screen, 7 feet 6 inches. Length of Trays, 5 feet 3 inches.

All kinds of mixing, screening, pulverizing and grinding plants designed and equipped.

Write for full particulars.

WALKER & ELLIOTT, - - Wilmington, Del.
Complete Outfitters of Fertilizer Plants



An Installation of the Raymond Pulverizing-Air Separating System

Mill Owners Can Now Save the Millions Wasted in Pulverizing Products

Antiquated methods and inefficient machinery waste millions of dollars in reducing materials to powdered form. This waste can now be stopped by a more modern method—The Raymond Pulverizing-Air Separating and Conveying System.

This system not only grinds materials to any degree of fineness, and finer than all other methods, but it immediately separates it by a vacuum air suction system as quickly as the mill grinds. The separating system also acts as a conveying system, elevating only that portion of the pulverized material that is ground to the required fineness and carrying it without waste to the point of delivery or storage as needs demand. The

RAYMOND PULVERIZING-AIR SEPARATING SYSTEM

is the only known system that pulverizes and separates instantly, as well as continuously, and conveys simultaneously to point of storage any sort of material.

These systems are especially designed by our engineering specialists and built to suit the requirements of each plant.

They are installed only on our absolute guarantee that they will perform the service we claim, either in an improvement in finished product—an increased capacity or a saving in operation and maintenance sufficient to justify the installation, or you need not pay for it.

Write for our Book No. "C" and send us samples of your products. Tell us the degree of fineness you require, whether it is to be ground wet or dry, and we will show how it can be accomplished at the lowest cost.

We design special machinery and methods for Pulverizing, Grinding, Separating and Conveying all powdered products. We manufacture Automatic Pulverizers, Roller Mills, Vacuum Air Separators, Crushers, Special Exhaust Fans and Dust Collectors.

Raymond Bros. Impact Pulverizer Co., 1502 HARRISON STREET,
CHICAGO, ILL. [6]

The Raymond System requires the least horse-power. It is a compact combination of three systems all in one. It eliminates preliminary crushers and elevating and conveying machinery, needs no bolting cloths, reels or screens, because of separating by air, saves several handlings of material necessary with other methods, and leaves no waste or tailings. Every particle ground is confined in the mill and saved. No dust escapes to choke and poison workmen.

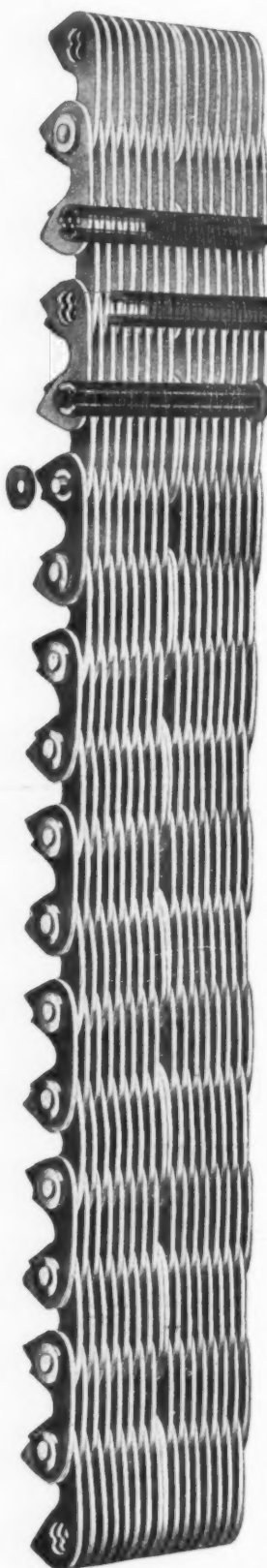
Can be adjusted to any mesh with a guarantee of a uniform fineness.

PLEASE CUT OUT THIS

RE M I N D E R

to write RAYMOND BROS. IMPACT PULVERIZER CO., 1502 Harrison St., Chicago, for their Book No. "C" on Modern Methods of Pulverization and Air Separation.

WHY IS THE DRIVE IMPORTANT?



Detail of Construction

You are **paying** for all the power you develop.

Patented
May 24,
1904.

You are **using** only the power you transmit.

The **difference** is **waste**, which should be charged **principally** to transmission or drive.

That's why the **drive** is **important**.

In the **belt** drive there is **slippage**, and loss from stretched belting.

In the **gear** drive there's **excessive tooth-wear**, shock and strain, which mean **loss of power**, and there's noise and clatter.

Neither of these drives can be expected to give **full power**. Therefore your machine cannot reach its **highest-efficiency** point with them.

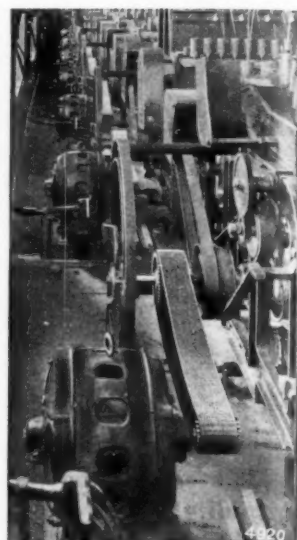
That is why it is **tremendously** important for you to study the use of

"Maximum" Silent Chain

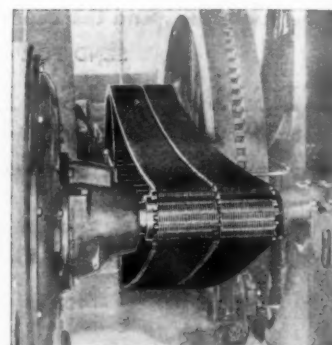
WRITE TODAY FOR BOOK 102-E

AND

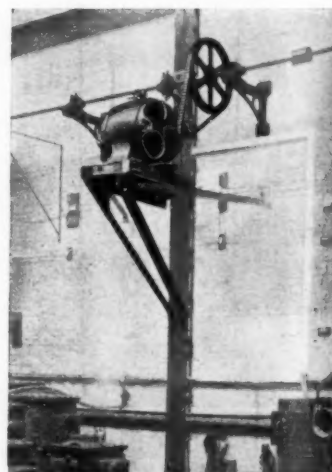
32-page Book No. 115, devoted to Silent Chain Driving
in Textile Mills



7 1/2-H. P. "Maximum" Silent Chain Drive
operating Twisting Frames.
Size of chain: 1 1/2 x 4 in.; speed, 1360 feet
per minute.



"Maximum" Silent Chain
Double Strand Drive—325 H. P.



7 1/2 H. P. Line Shaft Drive
"Maximum" Silent Chain

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TWO STATIONS IN NEW YORK

Through trains between New York and Philadelphia, Baltimore, Washington, and the South, Pittsburg, Cincinnati, Cleveland, Chicago, and St. Louis, arrive at and depart from the

Pennsylvania Station

Only one block from Broadway at 32d Street.

Special tube trains, running through to and from Manhattan Transfer and connecting with through trains leave and arrive at the

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Church and Cortlandt Streets, only five minutes from Wall Street, and only one block from the Subway at Fulton Street. These two stations

Accommodate all Sections of New York

Serving directly the downtown financial and business district, as well as the uptown hotel, shopping, and residential sections.

J. R. WOOD
Passenger Traffic Manager

GEO. W. BOYD
General Passenger Agent



The genuine only bears our name and registered trade mark.

THE ONLY EQUIVALENT KNOWN TO LINSEED OIL IS

GOES FURTHER
COSTS LESS

LINSINE

Sold in Direct
Competition with
Linseed Oil

When it is used to paint battleships, speeding at 21 knots an hour, where tons of water are constantly thundering heavily against it, and passing through all climates, it ought to stand well on anything, whether a HOUSE OR A SIGN, LINSINE dries non-porous, resists air and moisture, and makes painting waterproof. For use on wood, metal, stone or plaster.

THE LINSINE COMPANY, 1304 Pearl St., Philadelphia, Pa.

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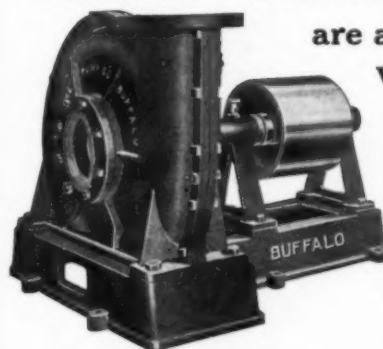
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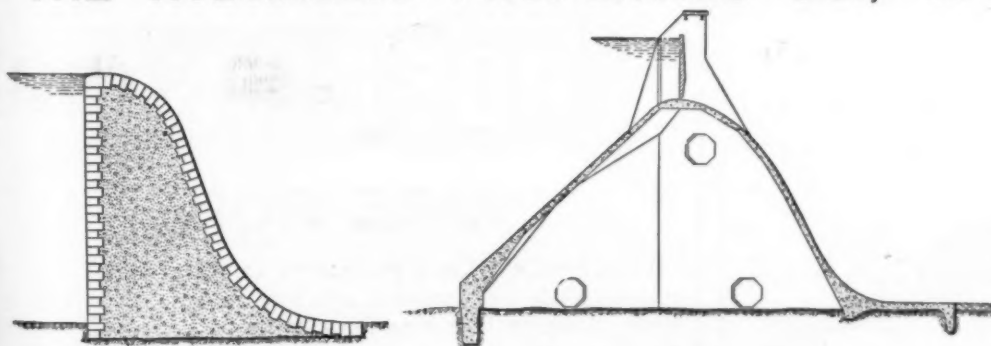
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MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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ond-class matter.]

BALTIMORE, OCTOBER 19, 1911.

THE SOUTH IN CONTRAST WITH BLIZZARD REGIONS.

A dispatch from Salt Lake City, Utah,
October 12, to the daily papers, said:

A terrific blizzard, the first of the winter,
is still raging in Montana, according to dis-
patches received today by the railroad and
telegraph companies. For nearly 36 hours
Butte's wire communication has been cut off.
Two and one-half feet of snow has fallen,
and the hard wind has blown it into im-
mense drifts. Railroad traffic is demoralized
throughout Southwestern Montana, and
many miles of telephone and telegraph wires
are down.

Before people knew the South they
were forced to be content with bitter
winter weather nine months in the year
and a burning heat unknown to the
South for the other three months.
Think of the biting death-bringing bliz-
zards, of the destruction of live stock,
of the added cost of doing business and
of living under such conditions as com-
pared with the softness of the balmy
Heavenly air that floats over the South.
If the people, compelled by circum-
stances or by lack of knowledge of a
better land to dwell in the blizzard
blasting bleakness of the Northwest,
could only know the glory of real living
amid the "Sheltering Palms" of Florida
or in other equally favored sections of
the South, it would be well-nigh im-
possible to build railroads rapidly
enough to carry the surging crowds who
would hasten from a living death amid
snow and ice to the glories of real life
in the fairest land on earth. Come on!
The South invites you. Here you will
find a land of possibilities not matched
anywhere on this planet.

THIRTY YEARS OF SOUTHERN UPBUILDING.

Only by contrasting the South of today with the South of thirty years ago
can one get a viewpoint from which to study the progress that has been made,
and to forecast the future. Only in this way can one understand the past, or
rightly measure what the future is to bring forth. Marvelous things have been
achieved. Still more marvelous achievements are to be made. Much has been
done, but there are limitless resources to be developed; limitless opportunities
to be utilized.

The attention of the whole world is being centered on the South. As never
before the business world—capitalists, manufacturers, merchants, investors,
farmers and health seekers—is studying the South. Without fully understanding
the record of the past thirty years they cannot correctly measure the possibilities
of the future. They must know the progress made as well as the resources in
soil, climate, minerals and water powers in order to rightly understand the
situation. In order to meet this need the MANUFACTURERS RECORD is preparing
to publish "Thirty Years of Southern Upbuilding," in which will be graphically
presented the story of the marvelous development of the last thirty years; the
story of the South's Redemption from Poverty to Prosperity, with a forecast
of the future.

In this publication will be given the most comprehensive review ever pub-
lished of the material upbuilding of this section, and a broad survey of its vast
and varied resources and advantages. This will be issued in the same general
form and the same size of page as the MANUFACTURERS RECORD. It will have a
very attractive cover specially designed, and be printed on a fine quality of paper.
It will be issued in connection with the celebration of the Thirtieth Anniversary
of the founding of the MANUFACTURERS RECORD.

It is proposed to make this publication epoch-marking. The story of the
progress of the South will be told more forcibly and fully than it has ever been
presented. Into that publication will be gathered a more complete, comprehen-
sive survey of what has been accomplished and of what remains to be achieved
than has ever been presented to the public. The story of the South's resources,
the South's progress, the South's prosperity, and the South's future will be
fully covered. "Thirty Years of Southern Upbuilding" will be worthy of the
South and of the work of the MANUFACTURERS RECORD. Every man interested
in any way whatever in the South, whether living in the South or in the North,
or the West or abroad, will necessarily want that publication. He will need it.
It will contain facts which he can secure nowhere else. It will be a treasure-
house. It will be consulted by managers of great industrial and investment
interests seeking to make their plans for the extension of their operations along
intelligent lines. It will be of such a character that the foremost business
houses, investors and financial interests in this country and other lands will
study it intelligently and thoroughly and keep it as a work of constant refer-
ence. It will be studied by students of economic history, by writers and speakers
and public men generally, who will find it a store-house of facts which they
constantly need. Every man interested in the progress of the South, or of the
country at large, will need a bound copy for his library as well as a copy for his
office, and every business man in the South will want to send at least a few
copies to his friends in other sections.

A copy will be sent free to every subscriber to the MANUFACTURERS RECORD.
To others the price will be 50 cents a copy in paper cover; \$1.25 in cloth binding,
and \$2 in flexible Russia leather. Orders must be accompanied by check.

WORK FOR IMMIGRATION.

For thirty years Capt. J. F. Merry
served the Illinois Central Railway in
promoting through immigration the de-
velopment of the territory along its
lines. He was one of the pioneers in
that field of material upbuilding in this
country and has left an enduring mark
upon many localities in the Mississippi
Valley. His earlier work was in the
Middle West, and the experience there
was applied with good effect when, with
the acquisition of lines in the lower val-
ley, the railroad turned its attention to
the South. At the request of the MANU-
FACTURERS RECORD, Captain Merry, now
in pleasant retracy on his farm near
Manchester, Iowa, has written for this
publication some articles epitomizing
his observations with special reference
to what has been done and can be done
in immigration to the South. One of
these articles is published in this issue,

and it deals with the work first done in
Illinois, Iowa and other Western States
as an indication of results that may be
expected from similar work in the
South.

BALTIMORE SHIPBUILDING.

Baltimore's prestige in shipbuilding,
dating from the time of the fast-sailing
clippers that advertised Baltimore's
commerce in all parts of the world, is
again emphasized by the announcement
that the Maryland Steel Co., at Spar-
rows Point, has obtained the contract
for the construction of four large steam-
ships for the American-Hawaiian
Steamship Co. Each of these vessels,
combining passenger and freight facili-
ties, will be 425 feet in length, and they
will use oil for fuel. The whole con-
struction will be done by the Maryland
Steel Co., and it is estimated that the
contract, representing something more

than \$2,000,000, will keep the ship-
building plant of the company busy for
18 months or two years.

SWEET COUNSEL AS TO SUGAR.

John Arbuckle, sugar magnate, says
the tariff on raw sugar is wicked. To
be sure, to be sure. He adds:

Every household that now buys three and
one-half pounds of sugar could for the same
money buy five and one-quarter pounds if
this tax were removed.

Again, to be sure, to be sure.

Furthermore, in his indignation at
this wickedness against raw sugar, he
says:

The beneficiaries of the duty are the plant-
ers of cane in the Hawaiian Islands, Porto
Rico, Louisiana and the Philippines and the
manufacturers of domestic beet sugar.

Thirdly, to be sure, to be sure.

But, instead of sailing for rest and
recuperation abroad, "In preparation
for the fight to be made in Congress
at its next session for free sugar,"—
free "raw" sugar, mind you—why not
take sweet counsel, one with another,
and apply the polariscope of truth to
the history of sugar in war and tariff
legislation during the past twenty
years? Why not seek solution of the
following problems in sugar geomet-
rics?

The connection between the cut-
throating of rival sugar refining in-
terests in the United States and the in-
terrupted annexation of Hawaii, with
its Paramount Blount episode in 1893.

The connection between the unholy
1898 war against Spain and the am-
bitions of enormous American interests
controlling, through the tariff, the mar-
ket for their manufactured products to
dominate the world sources of "raw"
materials.

The connection between these ambi-
tions and the persecution of Admiral
Schley because in his victory at San-
tiago he virtually brought the war to
an end before the accomplishment of
all its purposes, including the acqui-
sition by American interests of the sugar
plantations of Cuba.

The connection between friar land
deals by the Government in the Philip-
pines and the support given certain
political campaigns ever since by sugar
interests and others.

The connection between such interests
and the campaign for free "raw" sugar
from Cuba, or for the annexation of
that island.

The mysteries of the temporary Porto
Rican tariff, of paragraph 216, Schedule
E, of the tariff act of 1909 and of Sec-
tion 5, Schedule N, of that artistic and
interesting document.

Still taking sweet counsel, not to say
saccharine counsel, one with another,
the pertinent question might be asked,
How much cheaper have steel rails be-
come through the reduction of the tariff
on iron ore from 40 cents to 15 cents a
ton? Which would lead to the question,
Does anyone seriously imagine that the
removal of the tariff on "raw" sugar,
without removal of the tariff on refined

sugar, would mean cheaper sugar for the consumer?

It would undoubtedly mean an enormous benefit to the interests in the United States controlling sugar lands of Hawaii, the Philippines, Porto Rico and Cuba, and the ruin of the sugar planters of Louisiana. And sugar would be no cheaper.

In connection with these few remarks should be read the reflection, on another page of this issue, of the opinion in Louisiana about the free "raw" sugar proposition of John Arbuckle, sugar magnate.

SOUTH'S MANUFACTURING PROGRESS.

In the rates of increase in the amount of capital invested in factories and in the value of products of factories, the South, including Oklahoma and Missouri, is maintaining its prestige in comparison with the rest of the country that characterized its manufacturing progress in the last two decades of the nineteenth century. This is indicated in the factory figures of the South and of continental United States for 1900, 1904 and 1909, set forth in the following table:

	Capital.		
	1900.	1904.	1909.
South..	\$1,196,302,000	\$1,993,130,000	\$2,884,666,000
U. S. . .	\$8,975,256,000	\$12,675,581,000	\$18,428,270,000

	Value of Products.		
	1900.	1904.	1909.
South..	\$1,564,184,000	\$2,251,983,000	\$3,158,107,000
U. S. . .	\$11,406,927,000	\$14,793,903,000	\$20,672,052,000

The increase in capital invested in factories in the South between 1900 and 1904 was from \$1,196,302,000 to \$1,993,130,000, equal to \$796,828,000, or at the rate of 66.6 per cent., and between 1904 and 1909 from \$1,993,130,000 to \$2,884,666,000, equal to \$891,536,000, or at the rate of 44.7 per cent. In the rest of the country the increase between 1900 and 1904 was from \$7,778,954,000 to \$10,682,451,000, equal to \$2,903,497,000, or at the rate of 37.3 per cent., and between 1904 and 1909 from \$10,682,451,000 to \$15,543,604,000, equal to \$4,861,153,000, or at the rate of 46.4 per cent. Between 1900 and 1909 the increase was \$1,688,364,000, equal to 141.1 per cent. in the South, and \$7,764,850,000, equal to 99.8 per cent. in the rest of the country.

The increase in the value of factory products in the South between 1900 and 1904 was from \$1,564,184,000 to \$2,251,983,000, equal to \$687,799,000, or at the rate of 43.9 per cent., and between 1904 and 1909 from \$2,251,983,000 to \$3,158,107,000, equal to \$906,124,000, or at the rate of 40.2 per cent. In the rest of the country the increase between 1900 and 1904 was from \$9,842,743,000 to \$12,741,920,000, equal to \$2,899,177,000, or at the rate of 29.4 per cent., and between 1904 and 1909 from \$12,741,920,000 to \$17,513,945,000, equal to \$4,772,025,000, or at the rate of 37.4 per cent. The increase between 1900 and 1909 was \$1,593,923,000, equal to 101.9 per cent. in the South, and \$7,671,202,000, equal to 77.9 per cent. in the rest of the country.

In the ten years between 1880 and 1890 the increase in the amount of capital invested in manufacturing, which included hand trades and neighborhood industries, was \$519,115,000, equal to 157.4 per cent. in the South, and \$3,215,663,000, equal to 130.7 per cent. in the rest of the country, and the increase in the value of products was \$619,741,000, equal to 99.5 per cent. in the South, and \$3,383,059,000, equal to 71.3 per cent. in the rest of the country. In the

next ten years there was a slackening in the rates of increase in capital and in value of products in the whole country, but the rates in the South in both items were greater than the rates in the rest of the country.

The capital invested in factories in the South in 1909 was greater by \$94,390,000 than the total manufacturing capital of the whole country in 1880. The South thus shows that it is maintaining its important part in the industrial growth of the United States, which in 1909 was represented by 268,491 factory establishments with a capital of \$18,428,270,000, using \$12,141,291,000 of materials, paying \$4,365,613,000 in salaries and wages to 7,405,313 officials, clerks and wage-earners, using 18,680,776 primary horse-power of various kinds and producing goods to the value of \$20,672,052,000.

UTILIZING ALL SOURCES OF PROFIT.

The history of the Rothschild family, whose wealth seems to put to shame the accumulations of Morgan, Rockefeller and a few others in this country who are supposed to have accumulated a few hundred millions, or possibly half a billion apiece, as compared with the Rothschilds' estimated \$2,000,000,000, as told in *Munsey's Magazine*, carries the following statement:

Nathan Mayer was primarily a merchant, and his method of doing business was typical of the Rothschild point of view. He went to England originally because the Frankfurt firm dealt heavily in English cotton goods, and the Lancashire mill owners were arrogant and unreasonable. When he got to Manchester he found that there were three stages of profit in the business—the raw material, the spinning, and the weaving. "Why get one profit when you can get all three?" he said.

So he bought the raw material, had it spun and dyed, and supervised the manufacture, with the result that he trebled his investment.

In this is a lesson for the South. So long as it sells its raw material, so-called, whether that be cotton, pig-iron, lumber or phosphate rock, getting only the small profit on the first production and leaving to others the profit on turning these things into the finer finished form for final consumption, so long will it miss its opportunity for utilizing to the full its wealth-creating advantages.

When the South turns all of its pig-iron into the finished product, all the way from steel rails to watch springs; when it manufactures the bulk of its cotton and carries the process of cotton manufacturing up to the highest form of costly finished goods, and when instead of buying furniture from Grand Rapids or other places it utilizes in its own furniture factories its entire output of furniture-making lumber, and when instead of shipping millions of tons of phosphate rock at but little more than the cost of production to the fertilizer factories of Europe, it utilizes this rock through to the finished form in its own factories, or else secures from Europe a profit commensurate with the real value of this material to European interests, then it will begin to gather the wealth to which it is justly entitled. The South is losing through the non-employment of the labor necessary to carry its manufacturing interests to these finer finished products; it is losing in the demand which the employment of this labor would create for the diversified products of the farm; it is losing in the wealth that would be made by the work of the millions of people and the wages which they would earn,

and until it follows Nathan Mayer's plan of getting the profit out of all stages of the business, it will not be fully measuring up to its opportunity. It is true that this must be done by gradual stages. It is a work of evolution. But it can be hastened by the people of the South themselves if they will fully study the situation and realize how much can be accomplished by well directed energy.

CEMENT POSSIBILITIES IN FLORIDA.

The report of the United States Geological Survey on cement for 1910, just issued, in its discussion of the Florida situation, a State in which there is no cement plant, though it is annually becoming a large consumer of cement, says:

Florida is largely underlain by beds of limestone of tertiary and recent age, but these limestones are covered, for the most, by comparatively thick deposits of sand and gravel. The limestone of the Vicksburg group, which corresponds to the upper part of the St. Stephens limestone of Alabama, is present in northern Florida, and where there are outcrops of these rocks the chemical composition appears to be favorable for the manufacture of Portland cement. Lack of fuel has heretofore been one of the chief hindrances to the consideration of Florida as a possible field for the manufacture of Portland cement, but recently consideration has been given to the possibility of utilizing the extensive peat deposits as a fuel supply. There are no Portland cement plants in this State.

In the building of the East Coast Railway a very large amount of limestone was encountered, and much of the blasting along the line of that road in the extension to Key West was through limestone formation where enormous boulders had to be blasted out.

A study of the cement-making rock of the entire State, as well as of the other mineral resources of Florida, would amply repay that State. The suggestion in regard to the availability of the peat deposits of Florida as a fuel supply should likewise be investigated. Peat is successfully used in other places, and leading engineers have constantly advocated its availability in many parts of this country. But in addition to this as a possible source of fuel, Alabama coal could be delivered by water transportation from Mobile to Tampa, Key West and other points, and some system should be developed for doing this at a low freight cost in order to give to Florida's manufacturing interests an ample supply of fuel. With coal and fuel oil available by water transportation, and the possibilities of utilizing peat, there ought to be no halting in the industrial development of Florida from lack of fuel. This is a difficulty which should easily be overcome.

"ENERGY MADE THE CAPITAL."

In discussing the remarkable industrial development of High Point, N. C., Mr. H. C. Caldwell, a special correspondent of the *MANUFACTURERS RECORD*, in his article last week said:

It may be pertinently added that the energy made the capital.

This states the case very clearly. It was, indeed, the energy of the High Point people that made the capital which has developed the varied manufacturing interests of that prosperous town. High Point did not depend upon outside capital and say to itself that it could do nothing until it could induce men and money from elsewhere to locate there and take charge of its material upbuilding. On the contrary, its people by their actions have said, "We

can do it," and the energy which they gave to industrial upbuilding has resulted in the creation of great wealth. As new wealth is created by the energy of these people it is immediately reinvested in new enterprises or in the enlargement of existing plants. It was not the capital that made the energy, but the energy that made the capital which has enriched High Point. In this there is a lesson for every other town and city in the South.

A STRIKING INDUSTRIAL FACT.

A striking fact in the manufacturing activities of the country is the closeness to each other of the values of the products of the textile industries and the iron and steel industries. The 1905 census, dealing not only with what may be regarded as the primary undertakings in these industries, but with their veriest ramifications, found 17,042 establishments dealing with textiles in one form and another, and producing annually to the value of \$2,147,441,418 and 14,239 establishments dealing with iron and steel and producing to the value of \$2,176,739,726. In the case of textiles these figures covered the output of flags and banners, hats and caps, collars and cuffs, shirts and other clothing, as well as cotton, woolen, silk and linen goods just from the spindles and the looms, and with tools, typewriters, pens, locomotives and cutlery, as well as with the products of blast furnaces, rolling mills, etc. Between the respective totals in the 1905 census there was a difference in value in favor of iron and steel of \$29,298,308. The figures for 1909, dealing with certain primary industries in the two lines, reveal even a closer approach. They are shown in the following tables:

Textiles.		
Class.	No. of establishments.	Value of products.
Cotton goods.....	1322	\$629,899,000
Hosiery and knit goods.....	1374	290,143,000
Wool manufactures.....	1126	507,219,000
Silk and silk goods.....	849	196,475,000
Cordage, twine, jute and linen.....	149	58,946,000
Total number of establishments, 4829; total value of products, \$1,592,482,000.		

Iron and Steel.		
Class.	No. of establishments.	Value of products.
Blast furnaces.....	208	\$391,429,000
Steel works and rolling mills.....	446	985,723,000
Wire.....	82	167,706,000
Tin andterne plate.....	31	47,970,000
Total number of establishments, 767; total value of products, \$1,592,831,000.		

In both these lines the value of the primary products represents probably about 65 per cent. of the aggregate value of all products in the respective classes. The difference, still in favor of iron and steel, is, however, for these primary products only \$349,000.

HOW LIVE MEN GET TRADE.

The importance of getting the first available news about industrial enterprises is illustrated in a letter from L. E. Patton, manager of the Birmingham office of Hickman, Williams & Co., iron merchants, in which he says:

We have your letter of October 3 and note that our subscription has expired. Please continue to send us your weekly, also your *DAILY BULLETIN*, beginning at once and continuing for one year.

We have found both the weekly and daily editions of the *MANUFACTURERS RECORD* very valuable in keeping up with Southern development, especially with regard to establishment of new iron industries. By getting the first shot at a new customer for pig-iron or coke we have paid our subscription many times over, and will therefore continue to read the *MANUFACTURERS RECORD* with great interest.

CHEAP POWER ESSENTIAL TO CIVILIZATION'S ADVANCE.

In our time the benefactors of man have been those who furnished us with cheap power.—*Jacksonville Times-Union.*

In this statement is presented a great truth. Step by step the world has advanced just as it has had the benefit of cheap power. The steam engine in its broad utilization marked a revolution in civilization. The locomotive in its relation to civilization was for many years rightly typified by the name given to the first locomotive ever built in America, and that for a Southern railroad, which was called "The Best Friend."

The utilization of water-power for the transmission of electricity marked another great step which made possible material advance in regions which had been shut out from progress by reason of the high cost of power.

The internal-combustion engine, which made possible the automobile, and the small engine for use on the farm and in out-of-the-way places, has marked another step in the advancement of civilization. So great is to be the value of the work of the gasoline engine in making possible the automobile and auto truck and the utilization on the farm of power machinery that if the world today had to abandon the steam locomotive or the internal-combustion engine it might be a serious question, all things considered, whether it would not be wiser to give up the locomotive than the gasoline engine.

The auto truck is in its infancy. Its value to all business interests, and, therefore, to civilization, will match the value of the locomotive. It will compel the better paving of cities and the building and maintenance of thoroughly good roads throughout the country, for it will do practically all of the hauling now done by horse-drawn vehicles and a vast amount of hauling which would either have to be done by the railroads or be left undone.

On the farm there has been backwardness because farmers have not had the benefit of power machinery which has been available to the city dweller. Henceforth the extent to which power machinery is used in any community or any city will mark the civilization of that region. Without the utilization of power machinery in place of muscle-power of man or beast a community will not simply stand still while the rest of the world advances; it will stagnate and die.

As the building of railroads meant the creation of new centers of activity and the growth of towns and cities through which the roads pass, and likewise meant the gradual decay of towns and cities away from railroad facilities, so the future will show a growth of business and an advance in civilization of all towns and cities which can be reached by good highways for the automobile and the motor truck; and as these cities expand, the towns or communities which are without these good roads facilities will stagnate and die. What the railroad was in times past in the making of the communities, and its absence in the death of the business of communities, so the internal-combustion engine and good roads will mean in the future. This engine is a great power. Its use will mean advancement. The failure to use it will mean deterioration. This is always true of revolutionizing inventions. The machinery of some plant may have been adequate for yesterday's needs, but a new and revolutionizing way of doing the same work at a lower cost is born in some

inventor's brain, and the old machinery is worth nothing except to scrap. The new must be adopted or the plant will become bankrupt if it is to come in competition with other plants using the newest and most-improved invention.

But in the creation of cheap power much yet remains to be done. Our methods are wasteful. We are still sending up into the air as smoke and cinders a large part of the coal that is put into the boiler. The handling by every railroad of the coal necessary for its own operation is a serious burden upon its rolling stock and its rails. Tens of millions of tons of coal are annually handled by the railroads from the mines to central points for their own use, and then much of it wasted in smoke. It is difficult to conceive of a more uneconomic way of doing business. The very mining of coal has made but little progress, relatively speaking, since the day when the first pick was stuck in a coal mine. Hand labor still does a large part of the mining, and when machine work is used it is crude as compared with what ought to be feasible. The world has berated the South because for a century it has handled its cotton with the same barbarous saw gin and the same wasteful methods that existed a hundred years ago. And yet the very people who denounce the failure of the South to modernize its cotton handling, and who are perfectly justified in this position, for the South does throw away many millions of dollars every year in sheer waste, are at the same time often in the mining of coal, or in the handling of coal, and its use in the locomotive or in the boiler of the steam engine, using methods just as crude and just as wasteful as those of the old-time cotton gin and the method of marketing cotton.

If we would advance civilization we must everywhere lessen the cost of power and make it possible to do things in the manufacturing and transportation world with less burden for power than the cost of today. Why should millions of tons of coal be hauled in the aggregate millions of miles for locomotive use instead of being turned into electric-power at the mines or at some central point nearest to the mines? Electricity can be carried at a much less cost than coal. Why should we go on mining coal and handling it in the same primitive way in which it was mined and handled a hundred years ago? As inventive genius is now turning with renewed energy to the creation of cotton-picking machines, some one of which will sooner or later prove successful, it would seem that the time has come for inventive genius to turn its attention to coal-mining operations and to the lessening of the cost of transporting coal for railroad use.

While increased attention is every day being given to the utilization of water-powers for hydro-electric development to operate manufacturing plants and railways, both freight and passenger, it may be worth while for engineers to study the feasibility of finding a new means of mining and handling coal and of turning it at the mines into electric-power for the running of railroads. In decreasing the cost of power there is a field of almost unlimited possibilities opened up for the advance of every business interest, on the farm, in the factory and in the city. It is indeed true that the "benefactors of man have been those who have furnished us with cheap power." The field is an inviting one to which engineers may turn their attention with increased zeal.

Railroad and Farm Interests in Relation to the South.

By CAPT. J. F. MERRY, Manchester, Iowa.

As a preliminary to a study of the development in Mississippi, Louisiana and Tennessee, with which I have for years been personally familiar through my former connection with the Illinois Central Railroad, and to the study of some of the possibilities of those sections as they appear to me, it may be interesting to give a brief sketch of the part the Illinois Central Railroad has played in the development of several Western States, and how its co-operative work with the farmers of those States proved to the profit of the State, the railroad and the farmer. Some of these facts may enable those who have been made to believe that farming and railroad interests are antagonistic to see the matter in a new light. Moreover, it may be interesting to study what the Illinois Central (and I use this road because for over 30 years I was connected with it and am familiar with its operations) has done for the development of the West, in order to get a clearer idea of what will be the result of its work in turning population to the South and in encouraging the fullest utilization of the resources of soil and minerals and timber in that portion of the South tributary to its lines.

On September 17, 1850, Congress passed an act, which was approved only three days later, granting the right of way and making a grant of lands to the State of Illinois in aid of the construction of a railroad from the Southern terminus of the Illinois and Michigan Canal to a point at or near the junction of the Ohio and Mississippi River at Cairo, Ill., with a branch of the same to Chicago and another in the town of Galena to Dubuque, in the State of Iowa. The grant of lands referred to was to cover alternate sections in even numbers within six miles, if vacant lands to this extent could be found; if not, then within 15 miles. All pre-emption rights were to be respected, and in accordance with this provision the Illinois Central Railroad Co. afterward accepted payment for such lands from actual settlers at the Government price of \$1.25 per acre. Two years ago the writer visited one of the early settlers in Decatur county, Illinois, who still lived on the farm he purchased from the Illinois Central Land Co. at \$2.50 per acre. The farm was only fairly well improved, but on inquiry as to the present value of his land I was astonished to hear him say: "I dare not put a price upon the farm, lest I should find myself sold out of house and home, but lands no better than mine have sold for \$250 per acre the past season." This led me to inquire as to what agencies had contributed most to the development of the country and the phenomenal advance in farm lands from \$2.50 to \$250 per acre in 55 years. His reply was prompt and vigorous: "The Illinois Central Railroad Co. has been the leading factor in the settlement of our farm lands." He spoke in the highest terms of the Illinois Central land department. When the State of Illinois conveyed the alternate sections of lands to the Illinois Central Railroad Co. it provided that it should be a deed of trust in the hands of three trustees, two of whom should be appointed by the State and one by the railroad company. This insured the State against any bad treatment had the railroad company been so disposed. The total land grant to the company was 2,594,115 acres, or 3700 acres per mile. Of this, 107,614 acres were at once conveyed to pre-emption claimants. Governor Mat-

son in his inaugural message, January 3, 1853, said: "I have not heard that any settler upon the company's land has had occasion to complain, but, on the contrary, when the time by law had passed for proving pre-emptions upon the company's land by the settlers upon the lands, the company took no advantage and allowed the lands to be entered on proof being made, the same as if directed by law." This act on the part of the railroad company is characteristic of its methods from the very first. Such acts on the part of a great railroad corporation should not be considered as wholly philanthropic. They simply evidence an interest in the farmer who is trying to develop his farm and increase his products, which will necessarily increase the earnings of the railroad company.

One of the provisions of the Illinois land grant to the Illinois Central Railroad Co., and one which has proved of greater value to the State, was that 7 per cent. of the gross earnings from the lines covered by the charter should annually be paid into the State treasury. We do not have at hand the exact figures, but since 1853 it has amounted to more than \$25,000,000. At first thought the land grant of 2,500,000 acres of land, now worth from \$150 to \$250 per acre, would seem to have been a great source of revenue to the company, but when we consider that a large portion of these lands were immediately sold at prices ranging from \$2.50 to \$5 per acre, it is easy to understand that the State of Illinois had the best of the bargain. The company, however, saw the possibilities of Illinois and Illinois black soil, and although Chicago had at that time but 40,000 inhabitants, and the population of the State was only 851,470, yet a soil so fertile had only to be properly cultivated to produce a wealth for the commercial and industrial development of numerous cities. With this in mind the land department of the company advertised throughout the Eastern States as best it could the marvelous fertility of Illinois lands that were on the market at \$2.50 per acre. Not 12 months had passed when covered wagons lined every public highway from the East, and the prairies of Illinois became a great camping-ground for farmers who had made purchases of the Illinois Central Land Co., and ditching, plowing and planting was the springtime occupation. Active operations in the breaking up of prairie lands and the construction of fences, houses and barns continued for several years. New cities sprang up and new industries were established on every hand. Chicago, now recognized as the greatest city in the world for the distribution of farm products, was making rapid growth. In all this development, as the Decatur county farmer said, the Illinois Central Railroad Co. had been the leading factor in increasing the value of farm lands from \$2.50 to \$250 per acre. But Illinois was not the only State to profit by the conservative but wise methods of this company. In 1867 it leased lines from Dubuque to Sioux City, and from Cedar Falls to the Minnesota line. In 1887 it constructed a line from Cherokee, Iowa, to Sioux Falls, S. D., and another from Cherokee to Onawa and a branch line from Manchester to Cedar Rapids, and later a line from Fort Dodge, Iowa, to Omaha, Neb.

It came into possession of the leased lines and then began an aggressive policy

of developing Northern and Western Iowa, Southern Minnesota, Northeastern Nebraska and South Dakota. The children in the pioneer homes of Illinois farmers had now reached their majority, and were now anticipating homes for themselves. Illinois lands had increased in value to \$20, possibly \$40 per acre, a price entirely out of reach of the average young man or of the homeseeker of that day with little means. The Illinois Central operations west of the Mississippi River solved the problem for them, as it had for their fathers. Pamphlets and circulars were issued describing the black lands and the future agricultural possibilities of Northern and Western Iowa. Excursion trains were run over the Central's first line between Cairo and Dubuque to Sioux City and other points in Iowa. Trainload after trainload of land buyers from Illinois were distributed at points along the Illinois Central in Iowa, and many an Illinois young man now with gray hairs and a family about him dates his present prosperous condition to the Illinois Central Railroad Co., that presented to him the facts concerning Iowa soil and the prospective future of that great State. Lands that were purchased in the early eighties at prices ranging from \$5 to \$15 per acre are now valued at \$100 to \$150 per acre, and very few acres for sale even at these advanced prices. The writer a few months since, in addressing a public audience in Western Iowa concerning farming conditions in Mississippi and Louisiana, referred to the conditions of 30 years ago, when Illinoisans were being urged to locate in Iowa, and with what results. I emphasized the fact that, in my judgment, Mississippi and Louisiana, with good transportation facilities, good water supply, fertile soil and long seasons, presented opportunities fully equal to those of Iowa 30 years before. At this a gentleman in the audience said:

"Captain Merry, I was one of the Illinois farmers who took advantage of the first Illinois Central land excursion to Iowa. I bought a farm one mile from this town for \$10 per acre. I am now offered \$140 per acre, but it is not for sale, and there are hundreds of Illinois people located in Northwestern Iowa who swear by the Illinois Central."

After Iowa had become settled up by sturdy farmers from Illinois, Michigan, Indiana, Ohio and the far East, the Central turned its attention to Southern Min-

nesota, Nebraska and South Dakota, with the same general results. Thus it will be seen that this railroad company—and I use the Illinois Central because I am familiar with its operations—has been for years aiding the farmers while consulting its own interests. The same is true of many other railroads in the territory where they are operated. But the bringing in of settlers is not by any means the only method by which the railroads benefit farmers. New farming operations require new and expensive railroad equipment. When the farmers of Illinois and Iowa made wheat their principal crop an ordinary box car was all the equipment needed in its transportation. The character of the product was such that it mattered little whether it reached its destination in 20 or 40 hours. Fast trains were unnecessary, but when the farmers of Northern Illinois, Wisconsin and Northern Iowa abandoned wheat-growing and introduced the dairy industry, and nearly every farm neighborhood had a creamery, then it became necessary that suitable railroad equipment should be provided for its safe handling to the remotest markets in the country. Expensive refrigerator cars were at once constructed, fast-rate schedules were inaugurated, and from the New York market came the report that butter received from the above territory was well preserved and the equal, if not the superior, of any butter made in this country.

Here is only one of many instances where the railroads' and the farmers' interests are mutual. The dairy industry could not have succeeded without the hearty co-operation of the railroads, and the dairy products have added to the revenues of the railroad company. The same is true of other farming industries, and for this reason when the farmer is tempted to consider railroad companies antagonistic to his interests, he should consider how utterly helpless and hopeless would be his condition without their hearty co-operation, and railroad companies that do not enter heartily into devising ways and means for marketing the farmers' products, no matter what they may be, so as to secure for him the best possible net results, is blind to its own interests. After the Illinois Central Railroad Co. had aided in settling up several of the Western States, it then turned its attention to the South, concerning which I will have something to say in future articles.

OSTRICHES IN TEXAS.

Details of the Operations of the Ranch Near El Paso.

El Paso, Tex., October 10

Editor Manufacturers Record:

The El Paso ostrich farm has been started by Fred. G. Lemley, S. N. Schwabe, H. C. Marks and myself. I am the manager, with a life-long experience of the business in all its branches—farming the birds in South Africa, importer of the rough feathers into England and as a manufacturer also. For the past 18 months I have made a careful study of the raising of birds in Arizona and California. For some time I was in charge of some 3800 birds on the ranch of the Pan-American Ostrich Co., Phoenix, Ariz. In the Salt River Valley there are some 6000 ostriches which thrive and multiply, and there is no reason why a large business should not be established in El Paso and district, the climate and soil being singularly well suited.

It is our intention to raise birds of pedigree and by scientific feeding, selective breeding, with skilled attention at clipping and quilling, to improve the feather production of the birds. There is much to be accomplished on these lines. America is in a most favorable position from an ostrich farmer's point of view. It is the largest consumer of any one country of feathers, importing last year over \$5,500,000 worth of the raw material. It has a protective tariff of 20 per cent. on the raw goods and 60 per cent. on the manufactured article. We have made a start on a 20-acre ranch some five miles from this city with 20 selected birds of a high quality and of a value of \$10,000. We shall run an exhibition farm and eventually start a factory to prepare our plumes for the consumer.

The feathers of the birds on our ranch are taken every eight or nine months, a clipping being worth from \$35 to \$50 each bird. The first clipping is taken at six months. The chicks are particularly healthy in this country, and 50 per cent more are raised than in South Africa. Three to four birds can be run on one acre of alfalfa, which is their principal food.

THOS. W. KEMP.

National Nut Growers.

The National Nut Growers' Association at its session at Mobile, Ala., last week elected Messrs. H. K. Miller, Monticello,

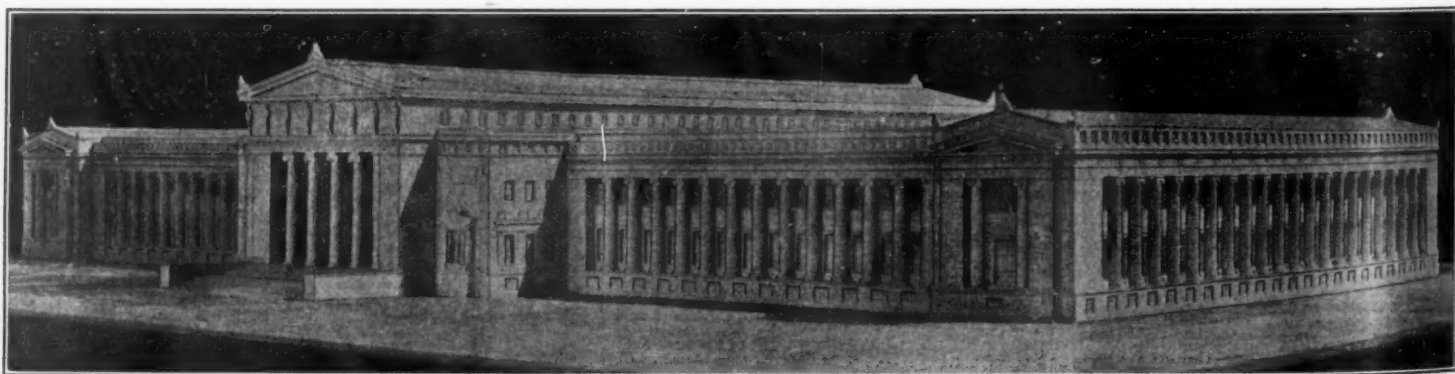
Fla., president; W. N. Hutt, Raleigh, N. C., and Dr. Charles A. Van Duzee, St. Paul, Minn., vice-presidents; Dr. J. E. Wilson, Poulton, Ga., secretary; Nathan Brewer, Newport, Fla., treasurer, and Theodore Bechtel, Ocean Springs, Miss.; E. W. Kirkpatrick, McKinney, Tex.; H. S. Watson, Bloomington, Ill.; Robert T. Morris, New York city, and B. W. Stone, Thomasville, Ga., executive committee.

An Agricultural Train.

To place the advantages of scientific agriculture before the farmers of East Tennessee the Southern Railway Co., working in co-operation with the State Department of Agriculture and the University of Tennessee, will operate a special agricultural train over all its lines in this section, the tour commencing at Blountville October 16 and lasting until November 10. The train will be made up of three lecture coaches, three exhibit coaches and two live-stock cars. State Agricultural Commissioner T. F. Peck, Dr. C. M. Morgan, dairy agent of the Southern Railway, and well-known experts connected with the State and university will accompany the train and will conduct lectures and demonstrations in each of the 33 points, which will be covered in 23 working days. The lecturers will attempt to acquaint the farmers with the latest scientific investigations relating to the soil, the plants and the farm animals, and to advise them how to increase crop yields, and at the same time by a rational system of crop rotation to leave the soil richer year after year when crops are removed. The subjects of education and health will also be treated. The Southern Railway is bearing the whole expense of the campaign in pursuance of its policy to materially assist in the development of the territory it serves.

Test of Price-Campbell Cotton-Picking Machine.

A public field demonstration of the Price-Campbell cotton-picking machine, commercially at work, is being given at Charlotte, N. C., each day from the 17th to the 21st of October, inclusive. It is stated that Charlotte has been selected because it is little over a night's journey from New York, and is equally accessible from most parts of the Atlantic Cotton Belt, being also conveniently near the main route from New Orleans and Memphis to New York.



THE \$4,000,000 FIELD MUSEUM OF CHICAGO TO BE BUILT OF GEORGIA MARBLE.

Georgia Marble Wins Again.

Georgia marble again wins over all competitors for the construction of the \$4,000,000 Field Museum to be built at Chicago. The accompanying picture shows a view of the museum, for the marble work of which a contract has been let to the Southern Marble Co. for \$1,500,000. The entire structure is to be executed in what is known as "White Southern" from the Georgia quarries of the Georgia Marble Co. The exterior marble work alone will

represent an expenditure of about \$1,500,000. This contract will make up an aggregate of about \$10,000,000 of general building contracts throughout the country for "White Southern" marble. The plant of this company is located at Marble Hill, Ga., with main office at Worcester, Mass. Recently the plant was doubled in size, and plans are now in progress for duplicating the present plant.

The main building of the Bureau of American Republics at Washington, completed last year at a cost of \$750,000, was

executed in this marble, and a \$100,000 addition is now being made with the same material. Among other noted buildings in which Georgia white marble has been used are the State Capitol of Rhode Island, the Stock Exchange of New York city, the Wellesley Observatory of Wellesley, the First National Bank of Kansas City, the State Mutual Building of Worcester, and other noted structures.

In addition to the marble for its general contracts, the company does a large business in selling various monumental

concerns, and recently the architects of a \$100,000 mausoleum lately built in New York employed a prominent stone expert to report on the quality of this marble. In this report he said: "It is the finest job of Georgia marble I ever saw, and I don't know of any other marble, native or foreign, which can surpass it."

This marble is only one of hundreds of illustrations which show how richly endowed the South is with natural materials out of which to create vast wealth.

Louisiana and the Tariff on Raw Sugar.

[Special Correspondence Manufacturers Record.]

New Orleans, La., October 14.

The cane mills have begun to grind, and Louisiana is shipping sugar. The acreage and the stand have probably never been exceeded in the cane belt of Louisiana. What the actual harvest will be remains to be seen. At the moment it is evident to the intelligent investigator that the apparent indications of a tremendous yield of sugar, giving to the planter a veritable "hog killing" in the way of profit, cannot be realized except through phenomenally favorable weather between now and first frost time, which must be late, some time in January, it would be, if left to a vote of the planters.

The moisture and the heat of the late summer and early fall months have contributed to a fine, almost rank, growth of the stalk, and the abnormally high price of sugar, due to a shortage in the world's present and prospective supply, has stimulated some of the planters to a premature beginning in the manufacture of sugar. In some cases the analyses show a condition so entirely unsatisfactory and unprofitable that the mills have been shut down after beginning to grind. Cool nights and dry, hot days are needed to provide the sucrose content necessary to profitable operation, the amount of sucrose content being dependent upon atmospheric conditions.

From an authority on sugar matters, who has just returned from a trip through the sugar territory of Louisiana, I get the statement that, while the cane crop looked exceedingly promising a few weeks ago, the situation today is far from satisfactory, the rainy season having caused the cane to take on a large growth, but at the sacrifice of sucrose content sufficient to make a profitable crop. According to this authority, the tests in plant cane on both sides of the Mississippi River, which is called the sugar coast, run as follows: 8.07 sucrose, 64.2 purity; 8.39 sucrose, 65.5 purity; 9.8 sucrose, 72.2 purity. These tests, taken October 9, show the average today of both sides of the river, extending over the entire cane belt, and mean an average yield of about 80 pounds per ton of cane, which is 20 pounds below the normal average. The Teche country, starting from Lafayette and working toward the Mississippi River, runs from 10.50 sucrose, 74 purity, down as low as 9.50 sucrose, 66 purity, which is far from being a satisfactory showing. However, if in the next 10 days there are cool nights and hot days, the cane will take on considerable sucrose, which will relieve the situation to that extent. Nevertheless, there is a feeling of apprehension and solicitude among the planters and manufacturers, as even with the high price of sugar there will have to be a material improvement in crop conditions in order to show a profit at the season's end.

In view of the impending, inevitable fight which will be made on the sugar tariff when Congress assembles in regular session in December, there is no doubt that such statements as these will be regarded by frenzied free traders as an attempt on the part of protected interests to gain sympathy by a species of special pleading.

However, there are elements entering into the American sugar situation wholly apart and above any consideration as to whether the sugar planters of Louisiana will make or lose money on this year's crop. The opinion is held by planters, bankers, publicists and men of affairs in vast numbers that without a protective

tariff the sugar-growing industry of the United States would perish in a night. This would mean a loss of \$200,000,000 to the men engaged in the industry in the South. It would also mean a loss of not less than \$40,000,000 a year of interstate trade to all the sections of the country, north, east and west of Louisiana, represented by purchases of merchandise, supplies, apparel, etc., for the planter and all those dependent on him; machinery, implements, mules, etc., in the production of which the whole outside country has a part. As a Louisiana planter put it:

"There are those, even among progressive politicians and journalists, who might hesitate before consigning a State of this Union to such devastation as the destruction of the sugar industry would bring to

Louisiana. Moreover," continued he, "analyses of the situation suggests a lack of either candid or intelligent investigation on the part of those who are clamoring for a removal of the tariff on raw sugar as a relief from the burden of present high-priced sugar. There is a shortage of cane sugar in Cuba this year estimated at 400,000 tons. The shortage of beet sugar in Europe will be 1,700,000 tons, making a total shortage of 2,100,000 tons. There will be in the United States this year a beet-sugar crop of about 550,000 tons, and the Louisiana cane-sugar crop will be about 350,000 tons, or a total of 900,000 tons. The consumption in the United States is about 3,400,000 tons per annum. The United States sugar crop comes in during November, December and January, in advance of the marketing here of the foreign sugar crops, so that if it were not for the American sugar crop coming in to fill up the gap, the price of sugar in the United States would be three cents a pound higher than it is today."

ALBERT PHENIX.

West Virginia's Rich Resources.

FORTUNES MADE AND BEING MADE IN APPLE-GROWING.

[Special Correspondence Manufacturers Record.]

Pittsburg, Pa., October 16.

The big land show that opened in Duquesne Garden in this city on last Thursday night to a crowd said to number 10,000 people is an impressive affair, and is stirring up a lot of interest in the "back-to-the-farm" movement. From ocean to ocean the sections are represented, though not all the States have shows. California, Idaho, Oregon, Wyoming, Texas, North Carolina, Virginia, Pennsylvania, Ohio—these and others have exhibits that attract the eye and appeal to the fancy. Northwest Canada, the Alberta country, has representatives on hand telling of the cheap lands and illustrating their productiveness by samples of grains and fruits grown there and striking pictures of the great horse and cattle ranches. Nebraska has sent the stuffed and mounted skins of two monster steers that weighed 3740 and 3776 pounds, respectively, and a hog that at three years weighed 1337 pounds. Some of these exhibits are highly trimmed and decorated, and it can be easily told from their crating and the manner in which they are unpacked and put in place that they are the accumulations of time, money and continued effort, and that they are handled and exhibited by experts who have made a trade of the exhibition business. Yet with all these against it, and lacking in all the professional touches, they show—probably strengthened by the lack—the most striking and impressive exhibit at the show is that from West Virginia.

From the live black bear at one end of the 85-foot space allotted to this State to the highly ornamental glass at the other, the whole thing is illustrative of the present conditions in West Virginia—from wildness almost primitive in one section to the last word in one of the most advanced arts in another. And lying between the time of the wilderness, with its wild beasts, and that of the great plant that from the sands on the earth's face works out the glass of simple but marvelous beauty, a story is told of richness and variety of soil products that strikes deep into the mind of every beholder who knows how to interpret the sign language. This exhibit, which thus stands naked to the eye, with nothing of ornamentation to distract the attention of the visitor from its utilitarian appeal, was gathered and

installed by the State Agricultural Experiment Station at Morgantown, under the direction of Prof. James H. Stewart, resident director and actual manager, and while it is the first attempt of the kind the institution has made, it shows a full understanding of the effect which a direct presentation of the State's resources of soil will have.

In high glass jars are shown the various soils from different sections of West Virginia—that adapted to the culture of wheat and corn; others that produce the best celery, cabbage and onions; still others that bring great crops of alfalfa; those in which timothy best flourishes—soils adapted to apples and tomatoes, and those where peaches and apples both do well. But most interesting, perhaps, because of the striking illustrations of their products presented with them, are those soils that are marked "apple" and "peach," respectively, uncoupled with any other product. It must not be thought because nothing else is mentioned as growing in them that these soils will produce nothing but apples or peaches, as the case may be, for even the "chert" of the Hampshire Mountain sides, though it looks like nothing but broken shale, brings excellent wheat and good corn, but they are so distinctively adapted to apple and peach culture that their other uses are not much dwelt upon.

Illustrating the productiveness of these soils are samples of corn—great ears a foot in length, big, deep-grained and sound from rim to pith—wheat, rye, oats, German millet, buckwheat, in grain and flour; potatoes, unrivaled in size and perfection of quality; stock beets, great fellows weighing 8 or 10 pounds each, and growing 30 tons to the acre; pears, quinces, grapes, yes, and cranberries; also the finest, flimsiest, "laciest" looking wool that ever came from back of sheep, and then the "big show" so far as this exhibit is concerned, the peaches and apples, and more especially the latter, for the former do not lend themselves so readily and so adaptably to the exhibition business. Nevertheless, the exhibit of peaches is sufficient to give an idea of what the State can do in the matter of quality, while the question of quantity must be left to the telling of those in charge, and of the literature with which they are armed.

West Virginia has for many years and in all sections produced peaches of superb quality and in quantity sufficient to supply the local markets, but it is only of recent years that their culture for the big markets has been taken up as a trade, and then in what elsewhere in the State would have seemed the most unlikely places, the eastern slope of the mountains that sentinel the counties of the "Eastern Panhandle," and in the "chert" lands thereof, the soil of which was yesterwhile thought to be so unproductive that you couldn't "raise a disturbance" on it, as the local vernacular hath it. Under the veneer of "chert," however, lies a bed of humus, accumulated from the debris of the centuries, and this furnishes the crop potentiality, while the harder surface prevents at once the too ready evaporation of the moisture and the washing of the soil.

The valleys overlooked by these hills were settled before the birth of the republic, and have richly repaid proper cultivation for a century and a half. There, as elsewhere, each farm had its orchard of peach and apple trees, the former of which usually bore with uncertainty for a few seasons, and then died away. The housewives dried, canned and preserved what they wanted of the fruit, and the remainder was given to those who came and asked or fell to the hogs. None, in the old days, ever thought of it as a commercial quantity.

I do not know the accurate genesis of the commercial peach business of Eastern West Virginia, or through what accidental circumstance it was discovered that the neglected mountain tops of Hampshire, Hardy, Grant and Mineral counties were ideal for the culture of this most luscious fruit, but the discovery was made some 15 or 20 years ago, since which thousands of formerly unproductive acres have been set with millions of trees and a great industry built up that brings hundreds of thousands of dollars annually into each of these counties. Hampshire county stands at the head of the list in peach production, and Romney, its county-seat, is the point of chief concentration in the shipping season. Here the fruit is gathered and sent out by the trainload, that delivered at carside one day being in the markets of Washington, Baltimore, Philadelphia and New York the next. The advantage which market propinquity gives these orchards is readily apparent to those who consider the matter. The peach, to be at its best, must ripen on the tree, and after it becomes full ripe it rapidly deteriorates from either time or shipment and handling. This advantage finds expression in a few cents per basket advance in price over rivals that arrive over the long haul, and a few cents extra per basket make a fine profit in the peach business.

The profits from these orchards are immense, running from 20 to 40 per cent. as a usual thing, and as high as 120 per cent. in one well-authenticated case, while in another instance a dividend of 110 per cent. was declared in one year. Think of an investment that yields back purchase price, maintenance and marketing all in one year, and leaves the property in good condition for future years. One thing about these orchards is that there are no crop failures. They lie above the frost line, and properly cared for will yield a profit each year. The peach trees are of quick growth and short life, and in many instances the orchardists alternate them with apple trees, which reach maturity about the time the peach trees give out.

But to return to the land show. The biggest part of the West Virginia exhibit, and, indeed, the biggest thing in the whole affair, is the exhibit of apples made by that State. The different varieties of ap-

ples, with their rich colorings, make a very showy exhibit with very little "handling," and those from West Virginia could easily be worked into a mosaic of great beauty. Think what artist fingers could do with "Grimes Golden," shading from almost white to a rich yellow; "Northwestern Greenings," in all the tints of green; "Black Twigs," with palest greens and reds that go almost to black; "Arkansas Blacks," that are in reality not black, but deep red and reddish purple; "York Imperials," running from scarlet through pink to green; "Baldwins," pink and green; "Stayman Winesaps," red and green; "Paradises," pink and green; "Jonathans," rich red, and so on through the various tints to be found in the "Northern Spy," "Willow Twig," "Twenty-Ounce," "Aiken Red," "Black Ben Davis," "Ben Davis" and "Wolfe River," these being the principal varieties shown. The apples come from many counties, including Hancock, Brooke, Wood, Lewis, Berkeley, Jefferson, Preston, Mineral, Pocahontas and Monongalia, each of which has its peculiar merits. Berkeley county, however, heads the list in the matter of successful apple culture, not because of any surpassing excellence of soil, perhaps, but because of longer experience in the business as a business, and of the greater acreage. And the story is almost romantic in its interest and unexpectedness.

Fifty years or more ago W. S. Miller, a farmer of that county, established a nursery for apple trees and acquired a business of considerable extent in furnishing young trees to the farmers throughout that general section. Meantime, probably to show his faith in his own wares, he put out a few trees each year until he had an orchard of 35 acres. Along about the middle seventies, when it was in full bearing, a New York buyer heard about it and made Mr. Miller a visit. The result was that he purchased the entire crop, paying for it something like \$17,000, which was "quite some" money for a farmer of that time and place. That was the starting-point for commercial orcharding in West Virginia on an extensive scale. Soon Mr. Miller's neighbors began putting out trees, and from that time on there has been a steady growth in the industry.

The most conspicuous success in the matter of money has been achieved by John Miller, a son of W. S. Miller. He was quite a young man at the time of his father's first big sale; in fact, he had just about rounded into his majority, but he did what so few very young men are willing to do—went into a business for the first returns from which he had to wait 8 or 10 years. In 1878 he set out 36 acres of trees, and 12 years later he put out 23 acres more. Then in 1897 he increased his acreage by 133 acres, so that now he has 182 acres in trees, ranging from 14 to 33 years of age. Last year he sold 25,000 barrels of apples, and this year he will sell 20,000 barrels, this being the "off" year. Next year he will have at least 30,000 barrels, as the largest part of his trees are just reaching their full bearing period. It is said that \$500,000 is a conservative estimate of his wealth, accumulated principally from 59 acres of apples. Others have done as well proportionately with smaller orchards.

About 10 years ago the first orchard company in Berkeley county was formed. It is known as the Mt. Vernon Orchard Co., and has 7000 trees eight and nine years old. It is now putting out 100 acres additional, or about 3600 trees. This is probably the largest of the companies, of which there are now about 25 in the county.

The best of the apple territory in

Berkeley county is on what is known as "Apple Pie Ridge," a sort of double-backed ridge that runs through the county from north to south, from the Potomac River to Frederick county, Virginia. This ridge took its name from the fact that early in the last century there were many apples raised on it which the owners dried in large quantities and which the people from far and near came to buy for pies.

The favorite soil for apples is a combination of limestone, soapstone and sandstone, though in one part of the county success is being had in a red shale formation.

On my way here last week I visited the orchard of the J. N. Thatcher Company, on "Apple Pie Ridge," a few miles out from Martinsburg. This company has 13 acres of trees 15 years old that two years ago produced a crop which brought \$6500 cash, and last year one that sold for \$4500. This year it will probably beat the 1909 mark. This company also has 20 acres of younger trees.

The favorite apples in Berkeley county are the "York Imperial," "Ben Davis," "Stayman Winesap," "Grimes Golden," "Black Twig," "Rome Beauty" and "Jonathan," in about the order named. The "York Imperial," which heads the list, is a heavy bearer, good for 50 years after maturity. Its wood is of tough fiber, and the limbs will bend down and sweep the ground without breaking. The loaded trees to be seen in the orchards at this season look like successive pyramids of red and green. The fruit, which ripens in storage about February, has a fine rich flavor. The "Imperial" begins bearing at about 10 years, when it is good for two barrels to the tree. At 15 they yield about four barrels, and this increases until at 20 they have been known to bear 15 to 18 barrels, and there are reports of a 28-barrel yield from trees 30 years of age.

Apples this year are selling at \$2.75 and \$3 a barrel, which was the prevailing price last year also. Neither in quantity nor quality is the yield in Berkeley this year quite up to that of last. It is the "off" year for quantity, and the quality was affected by the drouth that ran from June to September. It is confidently expected that within half a dozen or so years the annual apple yield in Berkeley county will reach a million barrels.

There are many fortunes yet to be made in apples in these West Virginia counties. Even along the Ohio River old orchards are being bought up, trimmed, cultivated and cared for, only to yield undreamed of returns to those who show their faith by their works. This is notably true of some of the fine old bottom farms in Wood and other counties below Wheeling.

One fine thing about this fruit business is that it is not weaning the farmer away from other crops. Too often the lure of an easy-money crop causes the farmer to turn his attention to it exclusively, going to town for his simplest supplies, and thus subtracting the potentiality of his acres from the general sum. The West Virginia orchardist is not doing this. When he puts a few acres in fruit trees he realizes the fact that he must work his other acres all the harder during the time his orchard is progressing to its bearing period, and the consequence is that by the time his orchard is ready to bring in returns he has his other land in better condition than ever before, finds it yielding more richly because of new methods picked up as he studies orchard culture, and he is in no mood to abandon its cultivation. As a rule, the best orchards are found on the best-cultivated farms, and the tendency is to increase the yield of other products as the orchard yield increases. The money from their orchards will be clear to

most of the owners, who have learned to "live at home" the while their trees were growing. And that is the real basis of all good farming—to make the farm support itself, so that the "money crop" will be clear gain.

The showing of potatoes, while not so large by far as that of apples, is a most notable one. From Preston county come sample tubers of such size that one would make a full meal for an ordinary family. They are smooth, white and sound as a dollar. Bake one, and when the skin is broken out falls a plateful of snowy substance, rich, dry and delightful. Potatoes equally fine in quality, though not so large, are also shown from Pocahontas county. These things are full of suggestion for profitable farming, and there is no reason why thousands of bags of potatoes should not go from West Virginia into the big markets each year. Instead of this, thousands of bags go into West Virginia each year from other States to supply the local demand. Look at this contrast:

West Virginia has very little home market for its great coal production, and almost every ton it sends to other markets must pass through some other coal field on its way—yet her people are digging 60,000,000 tons of coal a year.

West Virginia has hundreds of thousands of acres of soil unsurpassed for the production of potatoes, yet the products of the Michigan and Minnesota fields—far inferior in quality—travel hundreds of miles to reach West Virginia markets or to pass through her boundaries on their way to markets farther east.

Fortunes await those who apply approved methods of potato culture to the lands of Preston, Tucker, Randolph, Pocahontas and a full dozen of other West Virginia counties.

The land show is making a number of these things stand out like the famous "handwriting on the wall." GEO. BYRNE.

Motor Boats Made of Concrete.

In connection with the establishing of a plant for the construction of concrete barges in Baltimore by Frank A. Furst of this city, the accompanying illustrations of concrete motor boat construction are of interest. Mr. Furst has found that the

concrete barge built for the Arundel Sand & Gravel Co. has given such excellent service and economical cost of upkeep that he is making arrangements for the construction of concrete barges on an extensive scale.

The motor boat shown herewith has been built by a Holland firm, A. Last & Sons of Enkhuisen. This is believed to be the first motor boat constructed entirely of reinforced concrete and steel for reinforcing. The framework was made up of an iron keel, to which were attached iron rods running longitudinally and transversely, thus conforming to the desired lines of the hull. A wire netting was secured both inside and outside of this framework and cement plaster applied. The necessary fittings were put in place before the plaster was applied, so that they were firmly embedded when the hull became hardened. Five coats of waterproof paint completed the boat. With the numerous developments of expanded metal, woven wire, waterproof cement, cement guns for applying the cement rapidly and of waterproof density, it is reasonable to believe that such boats may be built in this country economically and with many advantageous qualities. This is another illustration of the practical uses for cement, for which product new uses are being constantly found.

Demonstration of the Goodwin Cotton Harvester.

The Goodwin cotton harvester will be in operation each day of the current week at the State Fair being held at Raleigh, N. C. This harvester has been designed especially for individual farmer's use in cotton plantations of any size, and it will be seen actively picking cotton from this year's crop during the State Fair by the thousands of farmers and others attending. It will be under the personal charge of C. N. Goodwin, the inventor. Citizens' National Bank, Raleigh.

Agents of the Government are looking into a tract of 75,000 acres of land in Johnson county, Tennessee, and extending into Virginia, which has been offered as a portion of the proposed Southern Appalachian Forest Reserve.



CONCRETE MOTOR BOAT UNDER CONSTRUCTION.



COMPLETED CONCRETE MOTOR BOAT.

NORTH CAROLINA TOWN ACTIVITIES

MT. AIRY'S ACTIVITIES.

Granite Works, Furniture Factories and Other Industries.

[Special Cor. Manufacturers Record.]

Mt. Airy, N. C., October 12.

Here in Surry county is the growing city of Mt. Airy, so often referred to as "The Granite City," because of the inexhaustible supply of fine quality granite found here. "Inexhaustible supply" is the accepted term, inasmuch as the great deposit here has been worked for years and

Mt. Airy enterprise and resources. There are several furniture factories here, having approximately \$500,000 invested, with between 400 and 500 men employed, and paying some \$200,000 in annual wages. This amount, and the \$600,000 which the tobacco planters receive in cash each season for the tobacco they sell on the warehouse floor, means a considerable trade for this city and vicinity. Other manufacturing plants add their quota to Mt. Airy's trade and progress. Machine shops,

wagon works, etc., take care of the local trade.

The machine facilities will be augmented in 1912 by the machine plant and garage which Thomas J. Smithwick intends to erect after the first of the coming year. He plans a 32x100-foot fireproof structure, brick, with cement floors, without any columns, of metal roof and wood windows. This building will be equipped with modern shaper, lathe, drill, press, power hack saw, hand tools, dies, etc. The machinery will cost about \$1500 and the building about \$2000. Mr. Smithwick is a graduate of the North Carolina Agricultural and Mechanical College, and was for some years with the North Carolina Granite Corporation. Much of the local machine installation are his work, and his new facilities will be of advantage. He is his own architect and contractor.

Mt. Airy has about 4500 population; and the city has the best advantages that schools, churches, banks, etc., afford. There are three financial institutions—First National Bank, with \$75,000 capital and \$20,000 surplus, Geo. D. Faucett being president; Surry County Loan & Trust Co., with \$25,000 capital and Mr. Faucett as secretary-treasurer; Bank of Mt. Airy, with \$50,000 capital and \$20,000 surplus.

Railway accommodations to and from Mt. Airy will be added to when the Statesville Air Line, now under construction, reaches its destination at Statesville on the south. A branch of the Southern Rail-

Ridge Mountains but 15 miles distant, it is evident that the health of the community is admirably served by natural conditions.

H. C. CALDWELL.

TWO CAROLINA TOWNS.

Reflection of Industrialism at Lexington and Thomasville.

[Special Cor. Manufacturers Record.]

Lexington, N. C., October 10.

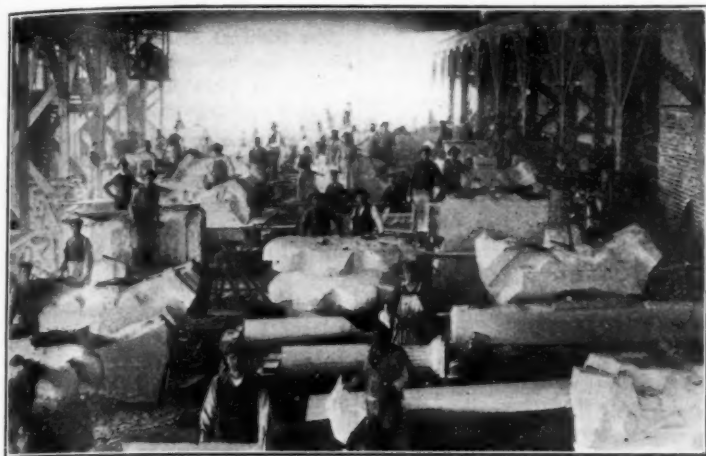
Here in the center of the Piedmont region, in Davidson county, is a progressive city at the junction of two of the South's greatest railways. Lexington is in the midst of a cotton and furniture manufacturing district destined to be prominent in the development of Southern resources. It has 38 factories, with an invested capital amounting to nearly \$3,000,000, the product of these plants including cotton goods, chairs, general furniture, mattresses, machinery, building supplies, factory equipment, clothing, wagons and the usual foods made by the mills. About 6000 is the population. In 1900 there were only about 1200 people and 3 factories here, two for cotton and one for flour; so it is evident that Lexington has decided advantages for industrial activity, and that its citizens are taking advantage of them.

This is one of the many cities to which the Southern Power Co. of Charlotte is transmitting electricity from its various water-power developments, and thus cheap power for manufacturing is available for the established plants and for those that will be here in the future. Manufacturers who are seeking sites for factories where economical and efficient operation can readily be attained should not fail to investigate Lexington before choosing. They will be offered especial inducements to come here.

Besides its strictly industrial advantages, Lexington has those modern facilities which tend to promote the health, comfort and moral life of a community. The streets are well paved, electricity is used for lighting, good water is plentifully supplied, sewers are performing their service, completed stocks of merchandise are offered in the stores, banking facilities are adequate, sidewalks are largely constructed of cement, and there are churches and schools. The surrounding country has many farms, where, beside the produce of the truck garden, grapes, tobacco and cotton are grown.

Last year Lexington township voted a \$100,000 bond issue for road improvements, which is a strong indication that her people are mindful of the beneficial results arising from providing modern highways to make communication by vehicle easy throughout her territory. Much more could be said by your correspondent, but as his train for another city is almost due, this "jot from the road" must close.

Next to Lexington, Thomasville is the largest city in Davidson county. According to the last census report, Thomasville increased over 600 per cent. in population during the past 10 years. Ten years ago the volume of business transacted here was less than \$200,000, and last year it was more than \$3,500,000. The Cramer Furniture Co. has three big factories here, as has the Standard Chair Co. Other manufacturing enterprises are: Bard Lumber & Manufacturing Co.; Thomasville Picker Stick Co.; Thomasville Veneer Co.; Thomasville Furniture Co.; Lee Manufacturing Co. (tables); J. A. Green's spoke and handle works; Thomasville Chair Co.; Queen Chair Co.; Lambeth Furniture Co.; Thomasville Roller Mills; Glen Anna Roller Mills; Jewel Cotton Mills; Amazon Cotton Mills; Stokes-Everhart Machine Co.; Gray Concrete Co.; Norfolk & Western Planing Co.; Thomasville



CUTTING SHED, NORTH CAROLINA GRANITE CORPORATION PLANT.

there is as yet no indication of the supply being diminished. The property has long been owned by the North Carolina Granite Corporation, the active managers here at the main office and plant being Thomas Woodroffe, president, and George Woodroffe, vice-president and treasurer. The corporation has invested about \$600,000 in the plant, and between 600 and 700 men are regularly employed. The annual output is about 3000 carloads, some 35 tons to the car. Two hundred acres of granite land are owned, and the plant now covers 40 acres, all equipped with the latest designs of machinery to promote through economical development. Electric power is used, the electricity being obtained from the municipality's water-power development at Buck Shoals, which also supplies the city's streets and buildings with light. A \$35,000 stone-crushing plant has just been completed at the quarries, the output to be from 800 to 1000 tons daily for concreting and road work. Paving blocks cut here are shipped largely to Newark, N. J.; Elizabeth City, N. C.; Cincinnati, St. Louis and various other cities. One of the corporation's orders is from Washington, D. C., where its latest annual contract calls for about \$65,000 worth of curbing. Offices and representatives are maintained in several of the big cities North.

Within a mile of the plant, and obtaining its stone from there, is the Mt. Airy Granite Cutting Co.'s enterprise, of which George A. Bailey is vice-president and general manager. He is "on the spot," and the New York office is in the Terminal Building at 103 Park avenue. This company makes a specialty of carving for sculptors, and it is now employing about 130 men. An important contract is for granite carvings for the 42-story municipal structure, costing \$13,000,000, now being erected in New York. Recent shipments have included 24 sculptured panels, 16 arabesques, 4 big eagles, each 5 feet high, 2 large sculptured spandrels and a Corinthian capital that is said to be the largest single piece of granite ever quarried.

But granite is not the only product of



SPECIMEN BLOCK OF GRANITE QUARRIED AT MT. AIRY, N. C.



WORK OF MT. AIRY GRANITE CUTTING COMPANY.

way connects the city with Winston-Salem, the Mt. Airy & Eastern Railway (20 miles long) penetrates the timber forests of Patrick county, Virginia, and a survey is being made for an extension of the Roanoke & Southern between here and Roanoke, Va.

In the surrounding country is grown corn, wheat, rye, oats, garden crops and other similar products. Especially in Surry county the home of the apple, this fruit being largely cultivated on the ridges and in the coves. Probably the largest apple grower is the Sparger Orchard Co., which has 15,000 trees. Peaches, pears, grapes and berries are also profitable crops. Improved road work has not been neglected, the township having voted a tax for this purpose. About \$7000 is available annually, and it is being expended judiciously. A 3½-mile road has been completed to White Sulphur Springs, and another road (four miles long) is being constructed. Albert E. Smith is chairman of the road commission. Mayor Sydnor is alert to give information pertaining to the city and its surrounding territory. He says that Mt. Airy offers an excellent opportunity for the canning industry, and experienced canners are invited to investigate. With its location 1500 feet above sea level, and the Blue

Bottling Co.; Johnson Manufacturing Co. (lounges, etc.); Thomasville Light & Power Co., etc. The Amazon mill is doubling its plant, as recently detailed by the MANUFACTURERS RECORD.

There are two banks here, the Bank of Thomasville, J. L. Armfield, president, and the First National Bank, Charles F. Lambeth, president. Both of these presidents are active in the business life of the city, and are always prepared to act for the advancement of Thomasville's industrial interests. The Standard Chair Co. shipped 1080 carloads of product last year, and the Thomasville Chair Co. will ship as many this year. The Cramer people will also make big shipments when their plant is in full operation. Their plant was completed recently, and represents an investment of about \$500,000.

H. C. CALDWELL.

PROGRESSIVE HICKORY.

At Least \$2,500,000 Invested in Factories in the City.

[Special Cor. Manufacturers Record.]

Hickory, N. C., October 13.

Energetic, progressive and aggressive in business activity of all kinds are the people of this growing community of about 7000 population, about 5000 being within the city proper. Hickory is in Catawba county, and is on the watershed between the Catawba River and its south fork, where the upper Piedmont region of North Carolina merges into the Blue Ridge, nearly 1200 feet above sea level.

Industrial enterprises of various kinds flourish here, and new plants are being added from time to time. With no attempt to obtain a complete record of the various factories here, a visit of several hours acquaints one with facts of interest. The largest manufacturing establishment here is that of the Piedmont Wagon Co., control of which was secured recently by Pomeroy Bros. of New York, and they have increased the capitalization to \$1,250,000. In connection with this, the company expects to take decisive action toward increasing the sale of its product, but has not at present any plans for physical enlargement of the plant. Farm wagons are the output, and 120 men are now employed.

An enterprise just about to be established is the Hickory Chair Manufacturing Co., which was chartered recently with a capitalization of \$100,000. This will be a removal of the Surrey Chair Co. of Elkin to Hickory, and all the machinery necessary now is comprised in the present equipment. Two frame buildings clad with metal and a 75x20-foot brick-constructed drykiln will be erected. The buildings will be 80x150 and 50x125 feet, respectively. They are being planned, and will be constructed by A. C. Hunter, the company's superintendent. George A. Bailey will be the company's manager. Box-seat dining chairs of several varieties will be manufactured, and the annual output at first will be 7500 dozen, with about 75 workmen employed. A guarantee fund by local investors ensured this addition to Hickory's factories. The company is capitalized at \$150,000, and \$30,000 have been paid in.

Charter is being prepared for the Hickory Handle & Manufacturing Co., \$5000 being paid in, with an authorized capital of \$100,000. Buildings will be erected for this company's plant, but the details have not been determined. The officers are K. C. Menzies, president; J. L. Riddles, vice-president; J. L. Cilley, secretary, and A. A. Shuford, treasurer and manager. The J. Hunsicker factory at Conover, N. C., will remove to Hickory in this connection. Local investors are financing this proposition, and details

additional to the above short statement will soon be known.

The Brookford Cotton Mills, the Ivey Mill Co. and the A. A. Shuford Mill Co. own the cotton factories here. They manufacture sateens and scrim curtains, high-grade sateen for men's coat linings, and coarse yarns. There are approximately 3800 spindles and 700 looms operated, and the number of operatives is about 1000. The Ivey mill produced 50,550 pounds of cloth during September, that amount being 2550 pounds in excess of the regular monthly output and the largest quantity ever made by the mill in one month. In one week lately 70 bales of goods were shipped by the Ivey mill.

Another important enterprise is the Latta & Martin Pump Co., which has a large domestic and foreign trade, being especially busy at this time with foreign shipments. J. L. Latta is the company's manager.

Other industrial plants here include: Ivey Manufacturing Co., picker sticks, lug straps, etc., for cotton mills; Hickory Manufacturing Co., Hickory Novelty Co. and Hutton & Bourbonnais, making every kind of building material from raw product to finished article for buildings. Lumber, furniture, horsecollars, harness, ice, hosiery, flour, etc., are marketed by other manufacturers in Hickory. In all, there is not less than \$2,500,000 invested in factories here, that figure being named by my informant as the minimum. Much electricity is used for power, that wonderful energy for industrial purposes being distributed by the Thornton Light & Power Co., which obtains supply from the Southern Power Co. of Charlotte. The latter corporation is planning a development near Hickory, estimating that 8000 horsepower can be generated. Its dam will be constructed at Lookout Shoals, on the Catawba River. Other Catawba River power sites will then remain for future utilization.

Merchants and other business men called for by progressive cities are here to meet the needs of Hickory, and the business section is a most creditable one. Modern brick structures, mainly two stories high, well stocked with the latest productions and providing offices for general use, are seen in the principal streets. Two institutions cater to the financial wants of the people, one being the First National Bank, of which A. A. Shuford is president and K. C. Menzies is cashier, with a capital and surplus of \$235,000. The Hickory Banking & Trust Co. is the other. It has a capital stock of \$35,000, and W. X. Reid is cashier.

Hickory's Chamber of Commerce is an active institution, and, being composed of progressive men, it does not neglect any opportunity that arises for the legitimate advancement of the city's interests. A secretary devotes his entire time to the organization. He is A. K. Joy, for many years with the Pittsburgh Leader, and who has made this his home for some years.

Another point of view from which Hickory can be studied to advantage is that where its municipal improvements are considered. The streets are of tar-macadam, and the sidewalks of cement in the business district, the extent of the work being readily appreciated when it is known that a \$75,000 bond issue was invested for those betterments during 1910 and 1911. Another bond issue of \$50,000 will soon be voted on by the township, and it is intended to expend this money for roads outside of the city limits. Voting this bond issue—and the people do not doubt that the decision will be in the affirmative—will mean that there will be 50 miles of sand-clay roads constructed. Newton township nearby is also contemplating to vote for a like amount of bonds. So it is

evident that the good-roads movement has ardent advocates in this part of the old North State. It may be of interest to add that the State central highway extends the entire length of Hickory.

Electricity for lighting is in general use in Hickory, and plenty of pure water is abundant. Churches and schools of the best type meet the religious and educational needs of the people.

In climate Hickory is scarcely excelled elsewhere, its location near a great chain of mountains ensuring that healthful ozone which invigorates both mind and body. There is no irritating cold or excessive heat here.

Building construction receives the attention of the local architects and contractors, and several new propositions of this class are being considered. The First National Bank, now occupying a two-story brick structure, has purchased land for a new building, and will arrange details as soon as the site is available, the property being now occupied by the postoffice. The latter is to be replaced by the Government with another larger and more modern building.

Around Hickory farming flourishes. The soil is a sandy loam, with a red clay subsoil. Maize, wheat, oats, grasses, truck and clover are the principal crops. All the legumes thrive, thus providing food for live-stock. Sweet potatoes, strawberries, grapes, pears, plums, cherries, apples, etc., are also given the attention of agriculturists.

The Southern Railway bisects the city and provides ample transportation facilities for passengers and freight. It is augmented by the Carolina & Northwestern system, some time ago changed to the standard gauge. H. C. CALDWELL.

DEVELOPMENTS AT ATLANTA.

Activities Planned by Several Firms and Corporations.

Atlanta, Ga., October 14.

In Atlanta recently have centered several important preliminary moves toward the organization of development companies that will doubtless have much to do with the development in different parts of Georgia and adjacent States of mineral lands in the future. One of the latest developments is the application for charter that has been made by the Coosa Valley Company. This charter was applied for by Dr. E. J. Spratling, W. W. Reid, R. H. Jones, Thomas Berry, B. B. Hamilton, Jr., of Atlanta and Harper Hamilton of Rome. The capitalization of the company is fixed at \$2,000,000. These gentlemen have purchased and have options on 2300 acres of iron, coal, lime and cement lands in Coosa Valley of North Alabama, and it is their purpose after organization to establish plants and all necessary equipment to develop this property to the best advantage. Reports of the experts that have been over the property show that the land is exceedingly rich in minerals.

F. Marion Thomason and others of Atlanta are organizing the New South Marble Quarrying Co. with a capital stock of \$100,000. It is the plan of Mr. Thomason and associates to develop the marble resources of 1700 acres of land located on the Louisville & Nashville Railroad in Cherokee county, a few miles from Ball Ground, Ga. The main offices of the company will be in Atlanta. Plans have already been prepared for the erection of a 20-gang marble mill. This work will be done by day work under the personal supervision of some of the stockholders in the company. A contract has been placed for most of the crusher machinery, while Mr. Thomason states that they are now ready to receive prices and proposals on general marble-mill equipment. A

good-sized link of standard-gauge road has already been contracted for, and it is with this track that connection will be made with the Louisville & Nashville Railroad. It is the plan of the promoters of this scheme to sell the marble as it is taken from the ground in any size, and otherwise make wholesale deals with it.

A charter was applied for this week for the incorporation of the Lutz Development Co., by George H. Lutz and others, with a capital stock of \$100,000. This firm will have offices in Atlanta. It is understood that the new firm proposes to do a general mining and dredging business throughout Georgia and other Southern States.

The National Mosaic Flooring Co. of Mobile, Ala., has opened district offices in Atlanta in the Candler Building, with Mr. J. J. Asbury in charge. Although this office has been open only a few weeks, through the instrumentality of Mr. Asbury a contract has been let for this material to be used in the North Carolina State building at Raleigh.

Several important changes have been made in the activities of the municipal bond and corporation securities firms of Atlanta in the last few weeks. A charter was applied for this week for the Robinson-Humphrey-Wardlaw Company, with a capital stock of \$100,000, by Roby Robinson, W. G. Humphrey, Wm. C. Wardlaw and J. J. Goodrum, Jr., who have been identified with a number of large business projects in Atlanta. As soon as the building is completed this firm, which has been making its headquarters at the old location of the Robinson-Humphrey Company in the Empire Life Building, will take offices in the Third National Bank Building.

Mr. Hilsman of J. L. Hilsman & Co., dealing in municipal stocks and bonds, has contracted with four efficient office assistants in addition to his already large corps of assistants.

The Louis B. Magid Company has applied for a charter, and will handle municipal bonds and corporation securities when organized, specializing in electrical corporation securities. Mr. Magid is well known on account of his connection with several of the large water-power development projects. In view of the fact that the recent moves of the Georgia Railway & Power Co. absorbed all of Mr. Magid's interests in his several Georgia projects, he will shortly be relieved of the duties of active management of the properties he is interested in. This will allow him more time to expend on his new business.

The Wayne Oil Tank & Pump Co. of Fort Wayne, Ind., has opened a branch sales office in Atlanta, located in the Empire Life Building. Mr. Flagler, a former employee of the Standard Oil Co., has taken charge. ROY G. BOOKER.

Eastern Shore Farming.

Referring to the marked development on agricultural lines on the Eastern Shore of Maryland and Virginia and the betterment of the financial condition of the people of that section, Mr. R. B. Cooke, traffic manager of the New York, Philadelphia & Norfolk Railroad Co., writes from Norfolk to the MANUFACTURERS RECORD:

"Prior to the opening of this road, in 1884, the vegetables marketed or shipped amounted probably to somewhere between 10,000 and 20,000 packages yearly. In 1910 from this territory there were shipped 3,359,085 packages. The lands are being put in a high state of cultivation, and with plenty of good labor, which they need now, the time is not far distant when they can produce three or four times as much as they are doing."

FROM LAKES TO GULF.

Summary of the Association's Position in Convention.

[Special Cor. Manufacturers Record.]
Chicago, Ill., October 16.

The sixth annual convention of the Lakes-to-the-Gulf Deep Waterway Association closed its session at Chicago Saturday last. In many respects it has been the largest and most determined in its spirit of any that have preceded it, while the number of delegates was far in excess of those in attendance at previous conventions, about 6000 representatives forming the convention. Nearly every State in the Union was represented. They came from the territory between Florida and Washington, Texas and New York, Louisiana and Minnesota, representing a constituency of more than 40,000,000 people and the largest industrial and agricultural section of the United States.

Rarely has a more determined body of delegates assembled for a peaceful and patriotic purpose than the one which has just closed its deliberations. For six years the people of the West and South have been demanding that the great watercourses of the country be improved, and for six years they have been put off, upon various pretexts, until there has been inspired a spirit of determination that is positive in its demands.

Improved and cheaper methods in the transportation of the heavy products of the Mississippi Valley were imperatively demanded, and these can be supplied only by improving the network of navigable watercourses that is so widespread throughout the entire region of the Middle West. The Mississippi and its tributaries have a total mileage of 13,869 miles, while the mileage of the tributaries of the Gulf of Mexico (excluding the Mississippi) is 5261 miles, or a total of 19,130 miles. France has a total mileage of navigable waterways of 10,350, Belgium 1615, Germany 8545, and Holland 2100. Yet in the relative economic resources of these areas the Mississippi Valley is equal to seven such countries as France or Germany, while five-eighths of the resources of this continent lie in the Mississippi Valley, less than one-fifth of the total lies east of the Alleghenies and less than one-fifth lies west of the Rockies.

With this enormously productive natural capital, the people are at a disadvantage in the markets of the world. Every important country in Europe, with one exception, has the sea on two of its borders, the land hauls are short and the improved rivers make transportation to tidewater easy and inexpensive, but the Mississippi Valley is a thousand miles from the coast. Take the four States of Illinois, Iowa, Minnesota and Wisconsin, with an area greater than that of either France or Germany and with resources larger than both combined, and limit the people to the capacity of any number of railway systems in the transportation of its commodities, and one will soon discover why it is that the people of the Mississippi Valley States are so insistent upon the immediate and permanent improvement of its waterways that tidewater may be brought to within their borders.

It must be remembered that the productive and producing power of the Mississippi Valley has been and is still being enormously and rapidly developed, and has already outgrown the network of 240,000 miles of railroads upon which the people must now mainly depend for the transportation of the products of its soil, mills and factories; and remember, further, that even under such circumstances a very large proportion of these products seek other than the domestic markets. It is due to these conditions that our foreign

trade has nearly doubled in the last 20 years. Add to these facts the further realities that the center of population is now within the limits of Indiana, that the center of manufactures is now in Western Ohio, that the centers of production of corn, oats, cotton, coal and iron have nearly reached the Mississippi, and that the centers of wheat production and farm areas are now hundreds of miles west of that stream, and the justice of Western demands become convictions.

Is it to be wondered at that the question of transportation, with less costly conveyance than it is possible for the railroads to supply, should be one of the most absorbing and vital interests not only of the people of the Mississippi Valley, but of the entire country as well, when all these centers lie so far inland or that such interest should encourage the great movement that found expression in the Chicago convention?

This movement, without attacking our magnificent railroad system, demands facilities the railroads are admittedly powerless to give. In the United States we have 60 miles of railways for each 1000 square miles of territory, in Germany they have 165 miles, in France 140 miles, in the Netherlands 164 miles, in Austria-Hungary 101 miles, in the United Kingdom 189 miles, and in Belgium 398 miles. In addition to this, all of these foreign countries have internal systems of improved waterways supplemental to railway systems that put the United States almost beyond vision in the remote background.

Important as was the question of increased transportation facilities to the delegates at the convention and to the people they represented, the problem of cheaper conveyance was a more pressing one. It has been demonstrated that more than one-half of the income per capita of the American people is expended for the single necessity of transportation. It is estimated, further, that the per capita annual income of an American man is \$450, and that he pays for water and rail transportation nearly, if not quite, 60 per cent. of that income. For instance, we pay over \$2,513,000,000 to railroads, \$192,109,184 to four out of 34 express companies, \$31,876,000 for sleeping-car service, \$202,562,383 for mail transportation, besides other millions for street-car conveyance, drayage, to bus lines, electric-car roads, stage-coach conveyance and other means of transportation. Into the coat on a man's back goes shipping charges on the wool, and into the bread on his table the cost of conveying the wheat to the mill and the flour to his grocer.

Water transportation averages about one-seventh the cost of rail conveyance. The average charge by the railroads is 7.82 mills per ton mile; on the Erie Canal it is about 3 mills; through the "Soo" Canal the lake rate is 0.8 of 1 mill per ton mile, and coal is usually transported from Pittsburg to New Orleans for 1 mill per ton mile. The heavy and bulky products of the Middle West are exceedingly sensitive to freight charges and could be better and more economically carried by barge than by cars. The Middle West has a tonnage of 22,000,000,000, and if our waterways could be improved to furnish an outlet for this vast tonnage it would mean millions of dollars in lower freight charges for the producer and as many more millions saved to the consumer. That the slogan of the convention, "Water regulation is rate regulation," would be demonstrated by canalizing our navigable waterways was the belief of every delegate seated in the convention. That water transportation *does* influence railroad rates in the interest of the people is shown

in hundreds of instances similar to the following: Between St. Louis and St. Paul the distance is 573 miles (the route paralleling the Mississippi River, which is a navigable stream), and the railroad rate is 62 cents, while the distance between Chicago and Omaha is 497 miles (with no parallel waterway), and the rate is 80 cents. The rate is, therefore, 18 cents greater over the 497-mile route than it is over the 573-mile route.

From the opening of the convention to its close there was no word of denunciation or even criticism of the railroads. The fact was recognized that the West has outgrown the power of the existing railroad facilities to meet existing conditions. It was universally believed that the improvement of our waterways would result here, as it has resulted in Germany and France, in relieving the roads of the cumbersome, heavy and low-class freight and transfer to them the carriage of finished products, which paid a higher rate of transportation. The delegates believed that it would require five years of railroad building, at an expenditure of \$500,000,000, to put the roads in proper condition, and with the necessary appliances to handle expeditiously existing demands in the Middle West. The Lakes-to-the-Gulf Deep Waterway Association has no battle, either present or prospective, with the railroad corporations. Instead of fewer, the demand was for increased railroad mileage.

As showing the temper and spirit of the delegates, it may be said that they each pledged themselves not to vote for the election of any candidate, for any office whatsoever, who was not unqualifiedly in favor of immediate action in the improvement of the waterways of the country, not only to meet existing conditions, but to stimulate and increase the commercial growth and development of both our domestic and foreign trade.

\$2,000,000 SHIP CONTRACT.

Four Steamers to be Built by Maryland Steel Co.

Four 9000-ton steel ships to be built on the Isherwood system, in which the frames extend longitudinally from one end of the vessel to the other, instead of transversely as most vessels are built, are to be constructed under a contract just closed by the Maryland Steel Co., Sparrows Point, Md., for the American-Hawaiian Steamship Co. The Isherwood system, which has been adopted for these vessels, gives added strength in long vessels. Heavy transverse frames will be placed 11 feet apart to provide the necessary transverse strength and stiffness.

These vessels will be used in the American-Hawaiian Steamship Co.'s service between the Atlantic and Pacific coasts and the Hawaiian Islands, and will augment that company's present service preparatory to the opening of the Panama Canal, by which time this company will have its largely-increased fleet in operation. It is estimated that these four ships will cost over \$2,000,000.

They will be 425 feet in length, 53 feet 6 inches beam, and depth of hold 39 feet, and are designed for a speed of 12 knots per hour. Four Scotch boilers fitted for burning fuel oil, but which can be used for coal if necessary, will be installed. Fuel oil will be carried in the double bottoms and reserve tanks fitted for the purpose. The boilers will carry a pressure of 215 pounds per square inch, supplying steam for a four-cylinder quadruple expansion engine. The cylinders of this engine have diameters of 25, 30, 52 and 76 inches, with a 54-inch stroke.

These vessels will be practically duplicates of the three built by the Maryland

Steel Co. two years ago for the same company. One of the vessels on its maiden voyage to the Pacific coast made the trip of over 14,000 miles in 53 days actual running time, arriving at destination in as good condition as when starting.

At the present time some of the steamers of this line load cargo at New York and transfer it by rail across the Isthmus of Tehuantepec, where it is reloaded for its Pacific destination. The completion of the Panama Canal will eliminate the necessity and expense of this transfer.

The construction of these new ships and the two 542-foot navy colliers now on the stocks at Sparrows Point will require a force of about 3000 men in the shipyards alone.

BIRMINGHAM IRON MARKET.

Comparison of Present and Normal Rates of Production.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., October 16.

An aggregate of some 7500 tons of pig-iron was sold by local producers during the past week, and the inquiry now pending is very encouraging. The status of prices is considered practically the same as at the time of last report. Producers are unable to realize a higher asking price than \$10.25 per ton at Birmingham furnaces for any deliveries within the remainder of this year, while the bulk of tonnage recently sold brought a \$10 per ton Birmingham basis. For first-quarter shipments the market is apparently established at a basis of \$10.50 per ton Birmingham. Approximately 1000 tons of No. 2 foundry iron for delivery in the first quarter was sold last week at the price just mentioned, but from the Northern and Eastern markets reports frequently mention Southern iron as available in the several localities represented at from \$10 to \$10.25 per ton at Birmingham for shipments extending even into the second quarter. It is noted, however, that the majority of the local producing interests have not yet opened order books for first-quarter or first-half contracts at any price, and that, notwithstanding the low levels for spot shipments into non-competitive territory, certain interests have very little tonnage to offer for shipment in the remainder of this year.

Such conditions are not realized until the present rate of production is compared to the rate generally considered normal, and to illustrate the furnace operations on foundry iron today are outlined as follows: Tennessee Coal, Iron & Railroad Co., one stack out of four available; Woodward Iron Co., two stacks out of three available; Sloss-Sheffield, three stacks out of seven available; Alabama Consolidated, two stacks out of four available; Birmingham Coal & Iron Co., one stack out of two available; Southern Iron & Steel Co., no stack in operation out of two available; Anniston Iron Corporation, one stack out of two available. The Republic Iron & Steel Co. has three stacks in operation at its Thomas (Ala.) plant, which is the entire capacity, but to offset this neither the Central Iron & Coal Co. nor the Williamson Iron Co. are producing iron, and together have two stacks available. The stacks now in operation have been operated very successfully for some months past, and as a result the stock accumulation is largely of high-grade iron, with the shortage of low grades very perceptible. An inquiry for some 3500 tons of low grades for delivery during the remainder of the year is now pending, and that the lowest figures so far elicited from the selling interests were \$9 per ton Birmingham for gray forge, with \$8.75 per ton Birmingham for mottled. The market for all grades, where shipment

can be made within the remainder of the year, is quoted as follows per gross ton f. o. b. cars here: No. 1 foundry, \$10.75; No. 2 foundry, \$10.25; No. 3 foundry, \$9.75; No. 4 foundry, \$9.50; gray forge, \$9.25; mottled, \$9.

There has been no change in the production of basic iron, and prices are being maintained at about the same basis as for No. 2 foundry. The local consumption of basic is slightly less than at the time of last report owing to the curtailment of operations at the steel plant of the Tennessee Coal, Iron & Railroad Co. at Ensley, Ala. The operation of this plant just mentioned is now limited to five days per week, and only five open-hearth furnaces are kept in blast. It is probable that the blast furnace of the Southern Iron & Steel Co. at Alabama City, Ala., will soon be put in operation to supply basic for the steel mill there, although no definite announcement is made in that regard.

A large contract for water pipe has just been awarded Southern producers by the city of Long Beach, Cal., and additional tonnage is expected to be placed during this week for requirement at a Mississippi point. The volume of inquiry being received is fairly satisfactory, but no large tonnages are being advertised for letting at an early date. It is not learned just what tonnage will be placed by the city of Los Angeles, but bids have already been submitted and only the award remains to be made. For the small orders being placed for maintenance and extensions producers are fully maintaining prices. Stock accumulations are light comparatively at all local plants, and order-book requirements will warrant steady operations for some months from date. Asking prices, which are firm for small orders, are quoted as follows per net ton f. o. b. cars here: Class "B" or water pipe, 4-inch to 6-inch, \$23; 8-inch to 12-inch, \$22; over 12-inch, average \$21, with \$1 per ton extra for class "A" or gas pipe. These prices are subject to shading for large municipal contracts.

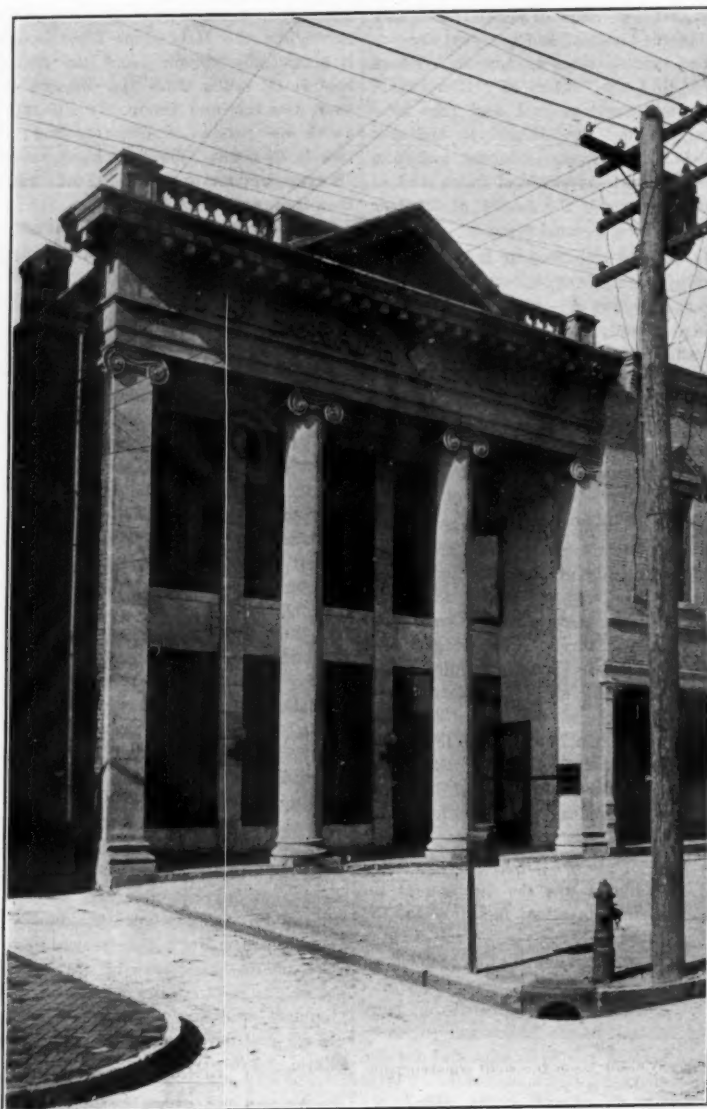
Dealers' asking prices have not been revised, but the market is without a criterion as to values and quotations are nominal. The demand has for some weeks been of a very mandatory nature, with a wide margin in prices offered and dealers' quotations. This is especially true of the wrought and steel grades. But little interest is manifested in old car wheels, rails or axles, and with No. 2 foundry pig-iron available at \$10.25 per ton, the demand for light cast and stove plate is very light. Asking prices are nominally as follows per gross ton f. o. b. cars here, viz.:

Old iron axles, standard, \$15.50 to \$16.
Old iron axles, small, \$12 to \$13.50.
Old steel axles, light, \$13 to \$13.50.
Old steel axles, standard, \$14 to \$14.50.
Old iron rails, \$13 to \$14.
No. 1 railroad wrought, \$11.50 to \$12.
No. 2 railroad wrought, \$8 to \$8.50.
No. 1 country, \$7 to \$7.50.
No. 2 country, \$6.50 to \$7.
No. 1 machinery, \$8.50 to \$9.
Standard car wheels, \$11 to \$11.50.
Tram car wheels, \$8 to \$8.50.
Light cast and stove plates, \$7 to \$7.50.

No change is made in quotations on light rails, and the tonnage recently sold is small. As has been stated previously, the available supply of relaying rails has quite met the demand locally for mine and furnace operations, while the demand for any material necessary for operations in the lumber industry is at this time very light. We continue to quote 12-pound rails at \$28 per net ton f. o. b. cars here, with 16-20 and 30-pound rails quotable at \$27 per net ton f. o. b. cars here.

A strong demand continues for steam

MACON TELEGRAPH'S NEW HOME.



The Macon (Ga.) *Telegraph* recently celebrated the opening of its new quarters by giving a housewarming to its friends, and about 10,000 persons were entertained in five hours. The *Telegraph* is one of the oldest papers in the South, and enjoys a prestige that few papers in this country hold in the newspaper business. The publication was begun in 1826, and, like many other papers, it has moved around, using first one store building, then another, until recently its entire plant was destroyed by fire, it having occupied a veritable fire trap in the shape of a building that had been adapted to newspaper purposes. Immediately after the fire the *Telegraph* sought to find new quarters, but Macon's development and growth had been so great that there was not a vacant building in the city, and this made it absolutely necessary that the *Telegraph* buy a piece of property and erect a building for itself. A deal was made at once, and plans were drawn for a strictly fireproof building to contain the entire mechanical equipment for publishing the *Telegraph*. There are two distinct buildings, one facing the street, being used by the editorial and news departments, as well as for business offices, and the rear building, which is separated from the office building by fire walls, and automatic closing fire doors, is built entirely of concrete, particular care having been used to eliminate all woodwork, so that this structure presents an absolutely fireproof building for the storing and operation of mechanical equipment. Both the front and rear buildings are 105 feet long each, and three stories high, including basements. The picture accompanying shows the front of the building as seen from the street. With the improved fireproof construction, insurance rates on the *Telegraph* equipment were reduced from \$2.35 to 75 cents per hundred. This effected an enormous saving in the item of insurance alone, being sufficient to pay the interest on the entire investment on the building. The *Telegraph* is enjoying an era of great prosperity. The people of Macon are all very proud of it and very loyal to it. It carries an immense volume of advertising, running 16 to 20 pages in its regular daily edition. Considering the fact that Macon has a population of 41,000 people, this is a remarkable showing in advertising patronage. It shows the hearty and cordial support the *Telegraph* has from the people of Macon and also the advertisers in the foreign field.

coal and domestic coal, and the prices for both grades are being fully maintained. The most important development recently relative to the operation of coal mines in this district was the announcement by the Tennessee Coal, Iron & Railroad Co. of a change to semi-monthly pay for all employees at coal and ore mines. Under ordinary conditions such a change would have had a very material effect on local labor conditions owing to the fact that the majority of the coal-mine operators pay their

miners once each month only. However, all classes of labor is very plentiful just at this time and no complaint is made of a scarcity of miners at any locality. The price for 72-hour foundry coke remains strong, but furnace coke is now obtainable at a five-cent per ton lower price than at time of last quotation.

A fairly satisfactory volume of business is being done in steel and iron bars at \$1.35 per hundredweight, with half extras being asked for such material at mills.

Government Lands in Arkansas.

The Board of Trade of Little Rock, Ark., is doing good work for the State in circulating a statement made by Guy W. Caron, register of the United States Land Office at Little Rock, showing by counties the areas of Government land in the Little Rock district, aggregating 155,000 acres, open to homestead entry. In addition to giving instructions for acquiring homestead, the statement says:

"Most of this land is fairly rough, and covered with pine or hardwood timber. The chief Arkansas crops are cotton and corn, but all crops suited to this latitude grow abundantly. Fruits of all kinds, berries and vegetables do especially well, and find markets at good prices. The central western counties raise extensive crops of peaches, strawberries, potatoes, tomatoes and other fruits and vegetables. The Arkansas climate is not too hot in summer, and is mild in winter, permitting of 12 months' work in the year for the farmer. No State is so well watered by clear rivers, creeks and brooks, and drinking water is readily found in all sections. Much land is unoccupied, offering free range for cattle, horses and hogs, all of which thrive with little care. Stock raising is in many localities the chief paying industry. Arkansas is not the thinly-settled State it is sometimes pictured, and every locality is accessible to churches and schools, and railroads and good wagon roads traverse every county."

What the South Needs.

Referring to a recent editorial of the *MANUFACTURERS RECORD*, "A Call to Business Sanity," the Southern States Engineering Co. of Atlanta writes:

"What we most need in the South, more particularly in Georgia, is more real farmers to develop the thousands of virgin acres of our State. We have the best to be had in lands, climate, etc., and have just raised and are now harvesting one of the largest crops of cotton 'per acre production' that this State has ever known, and we want more farmers to come among us and enjoy our prosperity. We have some of the best farmers to be found anywhere, but there is room for four times as many; lands are cheap, climate superb and the most hospitable people anywhere. With an increase of the acres in cultivation, the railroads will then feel an interest sufficient to extend their lines to all parts of our land, but when they extend their lines they want to know that the investment is going to be fairly treated—certainly better than has been the case in the recent past."

Railway Appliances.

Preparations are now being made for the annual exhibition of railway appliances used in the construction and maintenance of steam and electric railways, which will be given by the National Railway Appliances Association, Bruce V. Crandall, secretary, at the Coliseum and First Regiment Armory in Chicago, March 18-23, 1912. This is the week during which the American Railway Engineering Association will hold its thirteenth annual convention, and the Railway Signal Association will hold its spring meeting. The Railway Appliances Association has been incorporated under the name of National Railway Appliances Association, with offices at 537 S. Dearborn street, Chicago. The arrangement of the main floor space in the Coliseum will be practically the same as last year, but the balconies will not be used. In order to provide for the increasing demand for space, the First Regiment Armory, adjoining the Coliseum, has been leased, which will give an additional 16,000 square feet of floor space.

DISMAL SWAMP DRAINAGE.

Enlarging the Area of Highly Productive Farm Lands.

[Special Cor. Manufacturers Record.]

Wallaceton, Va., October 10.

There are but very few persons who have not heard a great deal concerning the Dismal Swamp, a vast area lying partly in Virginia and partly in North Carolina. The prevailing notion is, and has been, that this region is an almost impenetrable wilderness, the home of various kinds of wild animals and poisonous snakes. It has been pictured in the darkest colors by the writers of the past, and the thought of its ever being reclaimed remained afar off.

Today, however, it is known by some that the soil of the Dismal Swamp is among the best in the world, being made up of decayed vegetation of an average depth of three feet, and underlaid with a strata of clay from 5 to 10 feet in thickness, and when properly drained, and the soil relieved of its surplus water, it is capable of producing large crops of corn, stock peas, pea hay, onions, celery, head lettuce, etc.

Hogs can be grown at a very low cost by using a rotation of green crops, such as rye, vetch, rape, soy beans, clover, cowpeas, artichokes, peanuts and sweet potatoes, some of which can be grown every month in the year.

During the past summer some of the finest of corn has been grown on small tracts of land which a year ago was in timber, and the yield of other crops has proven equally as good.

For the purpose of reclaiming a portion of this land, the office of drainage investigation, United States Department of Agriculture, of which Mr. C. G. Elliott is chief, has started a drainage survey. The field work is now being done by Mr. Newton B. Wade, assistant drainage engineer, and a corps of assistants. Mr. George M. Warren, drainage engineer, has general supervision of the work. Headquarters have been established at Wallaceton, the home of the Norva Land & Lumber Co., which owns a vast area of the tract under consideration. From this point all the work will be conducted.

It is proposed to make a complete drainage survey of a part of the Pleasant Grove magisterial district, Norfolk county, Virginia. The proposed district, containing a number of small towns, lies just north of the Virginia-North Carolina State line, and is bounded on the west by the Dismal Swamp Canal, which forms a waterway from Norfolk, Va., to Elizabeth City, N. C.

About three months' time will be required for the field work. Plans will be made for the reclamation of about 20,500 acres of land, and a report, together with an estimated cost, will be submitted to the drainage district.

The North West River, the natural drainage outlet for the district, will be utilized as the main channel into which such lateral ditches will be run as are required, and as will be determined. It is with eagerness that the drainage work is being watched.

Will Develop 20,000 Acres.

The Georgia Farm, Fruit & Pecan Co. of Waycross, Ga., has organized with an authorized capital stock of \$1,000,000, and will develop about 20,000 acres of land for farming, fruit and pecan culture. It desires to purchase stump-pulling, ditching and farm machinery. Its officers are Geo. W. Deen, president; J. L. Sweat, first vice-president; J. M. Cox, second vice-president; C. M. Sweat, third vice-president; D. F. Arthur, treasurer, and E. H. Clark, secretary.

GOOD ROADS**WEEK'S HIGHWAY RECORD.**

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Harlingen, Tex.—City voted \$32,000 bond issue for street improvements.

Houston Heights, Tex.—City voted \$180,000 bond issue for street improvements.

New Iberia, La.—City voted \$35,000 bond issue to construct 12-mile road to Jeanerette.

Pawhuska, Okla.—Big Heart township of Osage county voted \$50,000 bond issue for road improvements.

Uniontown, Ala.—City voted \$10,000 bond issue for cement sidewalks.

Wichita Falls, Tex.—Precinct No. 1 voted \$150,000 bond issue for road improvements.

Bonds to Be Voted.

Greensboro, Tenn.—Jackson county will vote December 9 on \$150,000 bond issue for road improvements.

Greensboro, Ala.—Hale county will probably vote February 6 on \$100,000 bond issue for road construction.

Lillington, N. C.—Harnett county will vote December 12 on \$100,000 bond issue for road construction.

Oklahoma City, Okla.—Good Roads District No. 1, Oklahoma county, will vote on \$1,250,000 bond issue for construction of about 155 miles of roads.

Palestine, Tex.—Anderson County Justice Precinct No. 1 will vote November 11 on \$150,000 bond issue for road improvements.

Pecos, Tex.—Reeves county will vote on \$200,000 bond issue for road construction.

Quitman, Ga.—City will vote on \$23,000 bond issue for street paving.

Salem, P. O. Winston-Salem, N. C.—Town will vote December 26 on \$15,000 bond issue for street improvements.

Sapulpa, Okla.—Creek county will vote October 24 on \$125,000 bond issue for road construction.

Contracts Awarded.

Augusta, Ga.—J. G. White Company awarded contract to repave trenches on Broad street with brick.

Fort Worth, Tex.—City awarded contract to pave with bitulithic East 11th and East 12th streets.

Grafton, W. Va.—City awarded contract at \$1.36 per square yard to pave West Main street with brick.

Hamlin, Tex.—City awarded contract for paving six blocks of Central avenue.

Hill City, Tenn.—Hamilton county awarded contract for paving North Market street and Frazier avenue.

Huntsville, Ala.—City awarded contract to pave Eustis and Meridian streets.

Kansas City, Mo.—City awarded contract at \$56,000 to grade McGee street and Trafficway.

Knoxville, Tenn.—City awarded contract for paving; cost about \$25,000.

Marcelline, Mo.—City awarded contract to construct seven blocks of vitrified brick paving.

Mobile, Ala.—North Mobile Development Co. awarded contract for grading streets in North Mobile.

Paducah, Ky.—City awarded contract to grade and gravel streets and walks in Oak Grove Cemetery.

Palatka, Fla.—City awarded contract for about 15,000 square yards brick paving with concrete curbing.

Portsmouth, Va.—City awarded contract at \$9174 to grade 10 streets, and at

\$30,116 for concrete curb and gutters and concrete walks.

Selma, Ala.—Dallas county awarded contract to construct 18 miles of road; cost about \$30,000.

Statesville, N. C.—Iredell county awarded contract to grade Buffalo Shoals road.

St. Louis, Mo.—City awarded contracts for paving alleys with vitrified brick; total cost \$64,500.

Contracts to Be Awarded.

Bartlesville, Okla.—City receives bids until October 21 to pave Osage and Shawnee avenues.

Birmingham, Ala.—City will grade, macadamize and lay bituminous binder on several streets.

Brandon, Miss.—Rankin county receives bids until November 6 to construct 60 miles of road.

Decatur, Ala.—City of Decatur, New Decatur and North Alabama Traction Co. will pave Lee street with asphalt macadam; cement concrete car-track way and gutters.

Demopolis, Ala.—City will pave Walnut and Washington streets.

Hamilton, Ala.—Marion county will grade, drain and surface with gravel about two and a half miles of State-aid road.

Houma, La.—City will construct two and a half miles of concrete sidewalks.

Houston, Tex.—Condit & Henderson will build streets in Bellaire, Westmoreland Farms.

Kansas City, Mo.—J. C. Nichols Land Co. will construct several miles of paving, granitoid walks and curbing.

Little Rock, Ark.—City received bids until October 19 to grade, gutter, curb and build concrete sidewalks and build parkway.

Madisonville, Tenn.—Monroe county has \$150,000 available for road construction.

Monticello, Fla.—Jefferson county will construct sand-clay road.

Neosho, Mo.—Newton county will expend \$4000 to construct road.

Norfolk, Va.—City appropriated \$5000 for building sidewalks in Tenth ward.

Paris, Tex.—City will pave portion of West Bonham street with rock asphalt or other bituminous pavement.

Pontotoc, Miss.—Town receives bids until October 20 to construct concrete walks.

Renicks Valley, W. Va.—Greenbrier county will grade Summerville road.

San Antonio, Tex.—City appropriated \$43,424.30 for paving streets.

Waycross, Ga.—City will construct 35 miles of sidewalks.

Wilmington, N. C.—City receives bids until October 24 for constructing 1000 square yards sidewalks and grading Brunswick street.

E. T. Brown, of Coalgate, formerly county surveyor, has been appointed highway engineer of Coal county, Oklahoma.

Steam Laundries.

Though laundries can hardly be considered as manufacturing establishments, they have increased in number so rapidly in the past few years that the National Census Bureau has made a special study of them, and reports that in 1900 they numbered in this country 5186, with a capital of \$68,935,000. They paid in salaries and wages \$53,008,000, used \$17,696,000 worth of material and had \$14,483,000 miscellaneous expenses. They employed 112,064 wage-earners, and received for work done \$104,680,000.

Large landowners in Jackson county, Mississippi, are preparing to go extensively into rice culture.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

A YEAR ON THE SANTA FE.

Prosperity and Growth Shown—Progress of Construction in Western Texas.

The sixteenth annual report of the Atchison, Topeka & Santa Fe Railway Co., covering the fiscal year ended June 30 last, shows operating revenues \$107,565,115, increase as compared with last year \$2,571,922; total income \$109,772,481, increase \$2,229,231; expenses, including taxes, rentals and other charges, \$75,689,094, increase \$555,780; net revenues \$34,083,386, increase \$1,673,451; net income after payment of fixed charges, including accrued interest on adjustment bonds, \$21,371,068, increase \$945,283. Dividends were paid amounting to \$9,932,460 on the common stock and to \$5,708,690 on the preferred stock. There was appropriated \$414,139 for the fuel reserve fund and \$5,000,000 for additions and betterments, which left a surplus of \$315,777 for the year and making total surplus to the credit of profit and loss \$20,566,706.

The company now operates 10,400 miles of line. Its operating revenues consisted of \$71,787,200 from freight traffic, \$27,204,867 from passenger traffic and \$8,575,047 from mail, express and miscellaneous business. The operating expenses included \$33,183,520 for conducting transportation, \$16,059,786 for maintenance of way and structures and \$16,686,145 for maintenance of equipment. The ratio of operating expenses to operating revenues was 65.79 per cent.; last year it was 66.44 per cent.

It is interesting to note, as showing growth, that 10 years ago the company operated 7807 miles of line, its gross revenues and income were \$54,807,379 and its net revenue \$12,474,529.

Concerning the progress of the company's new construction in the western part of Texas, to which reference was also made in last year's report, the following appears:

"Of the line between Coleman and Lubbock there were completed and opened for traffic during the year 17.54 miles Lubbock to Slaton Junction. Rails between Coleman and Slaton Junction have been laid, and it is expected the entire line between Coleman and Lubbock will be completed and opened for traffic by November 1, 1911. The branch line, Slaton Junction to Lamesa, a distance of 54 miles, was completed and opened for traffic October 1, 1910, and the line, Lometa to Eden, a distance of 98 miles, has been completed to Brady, a distance of 66 miles, and was opened for traffic September 11, 1911.

"The work of reducing the grades and curvature of the San Angelo branch of the Gulf, Colorado & Santa Fe Railway between Temple and Coleman has been pushed throughout the year, the work between Temple and Lometa being practically completed. The improvement of this branch will facilitate the handling of traffic between points on or near the Gulf of Mexico and the Pacific coast, for which traffic the line between Coleman and Lubbock, in connection with the railways of other companies comprised in the system, will afford a new trunk line.

"The new West Texas mileage above referred to goes through a very important territory which as yet is almost entirely undeveloped. It is reasonable to anticipate that by virtue of this new mileage this part of the State of Texas will enjoy great development, and that the system

eventually will derive substantial benefit from such development, and also from the new through business which it is believed will result from the opening of this new through line between the Pacific coast and the Gulf of Mexico. * * *

"The mileage of second track in operation on June 30 was 687.58 miles, as compared with 526.95 miles at the close of the preceding fiscal year, being an increase of 160.63 miles. Second-track work is in progress on the Missouri division from Mendon to Carrollton, Mo., 25.64 miles, and on lines west of Albuquerque as follows: Rito to Laguna, N. M., 9.16 miles; McCartys to Horace, N. M., 10.82 miles; Flagstaff to Williams, Ariz., 32.97 miles; Supai to Fairview, Ariz., 10.57 miles; total, 89.16 miles.

"In addition to the above, second-track work has been authorized on the lines west of Albuquerque for a distance of about 40 miles in the vicinity of Needles, Cal., and extensive grade reductions and changes of line have been authorized preparatory to the construction of additional second track between Albuquerque and Gallup. Most of this work will be completed by the close of the present fiscal year, when second main track in operation will approximate 816 miles."

ALONG THE "KATY" LINES.

Gratifying Progress Reflected in the Annual Report—Many New Industries.

The annual report of the Missouri, Kansas & Texas Railway for the fiscal year ended June 30, 1911, covers 3377 miles of line operated, which includes now the Texas Central Railroad, that added 323 miles to the system, and the earnings of the latter are included in the totals. This should be borne in mind when comparisons are made with last year. The income statement shows operating revenue \$29,065,293, increase \$2,505,947; operating expenses \$20,606,515, increase \$1,420,466; net operating revenues \$8,458,777, increase \$1,085,480; taxes \$1,005,648, decrease \$7269; operating income after deducting net debit from outside operations, amounting to \$6604, as well as the taxes, \$7,446,525, increase \$1,097,916; total corporate income \$7,878,217, increase \$1,219,967; net corporate income after deducting interest, rentals, etc., \$1,773,706, increase \$732,212; balance after payment of dividends on preferred stock \$1,252,686, increase \$731,222. Ratio of expenses to revenue 70.90 per cent., a decrease of 1.34 per cent.

The revenue from freight was \$18,184,663 and from passengers \$8,923,250, the rest being from mail, express and miscellaneous sources. The assets are \$215,305,598, and include the road and equipment at \$207,145,262.

The total operating revenue, excluding the Texas Central Railroad, was \$28,085,949, an increase of \$1,526,603, or 5 1/4 per cent.

Concerning the construction and betterment work, it is noted that the property is in good condition, and that satisfactory progress was made in renewals of wooden trestles and culverts in concrete, strengthening bridges, renewing rails, building additional tracks and in other ways improving and enlarging facilities. Expenditures for new construction, equipment and improvements totaled nearly \$7,500,000. Grade reduction and double-track work between Atoka, Okla., and the Red River, 46 miles, was completed, and it has made an increase in the trainload (with the new freight locomotives) to 2620 tons, or 1346 tons more than the same engines could have hauled over the same track prior to the improvement. North of Atoka to Stringtown, seven miles, revision and double-track construction are being

finished up. North of Stringtown the Limestone Gap revision is done and in use. These two revisions will enable heavier loads to be hauled between McAlester, Kiowa and Atoka. Completion and operation of the Texas Central's extension of 41 miles from De Leon to Cross Plains is noted. The company also completed and put in operation the new freight terminals at St. Louis. It is interested in the union depot and terminals at Joplin, Mo., and the new passenger terminals at Denison, Tex., which were also finished and put in service. The Denison car shops that were burned in 1909 were rebuilt on a much larger scale. These items are only some of many station and terminal improvements on the system.

"While the commercial depression which prevailed during the year," says the report, "was not favorable to beginning new enterprises, 245 new industries of various kinds were established along the lines of your system, representing an estimated capital investment of \$4,573,676 and employing 3136 workers. There was considerable oil and gas development in Texas and Oklahoma during the year, some of the old fields having been extended and new discoveries made. * * * There is at this date (September 11) a favorable prospect for increased earnings during the coming season."

The report is signed by Edwin Hawley, chairman of the board, and A. A. Allen, president.

KNOXVILLE TO THE SEA.

W. J. Oliver Said to Have in Contemplation an Extensive Plan.

W. J. Oliver of Knoxville, Tenn., according to reports from there and other cities, is planning to build a railroad from Knoxville to the sea by connecting up the Knoxville, Sevierville & Eastern Railway, of which he is president; the Greenville & Knoxville Railway and the Savannah, Augusta & Northern Railway, which is partially completed out of Statesboro, Ga., and which he owns. The Knoxville, Sevierville & Eastern already plans to extend eastward from Sevierville into North Carolina, and the Greenville & Knoxville is building from South Carolina into that State. From Greenville, in the other direction to Augusta, it is said a new railroad will be built, using in part the completed roadbed (about 60 miles) of a line proposed some years ago, but which was never finished. Between Augusta and Savannah the Savannah, Augusta & Northern Railroad is operating 40 miles of line from Statesboro to Stevens Crossing, but it has some grade completed on which track has not been laid.

In connection with these reports it is said that S. H. Cohen, representing Mr. Oliver, is to establish headquarters at Augusta for a construction company which is to begin operations about December 1. It is further alleged that arrangements to finance the proposition are about completed.

The plan appears to be for the provision of a direct route for coal from fields in Tennessee.

American Traction & Power Co.

The American Traction & Power Co., Inc., of Wilmington, Del., according to information from an official source, has removed its main offices to Indianapolis, Ind., and will be located after November 1 in the Hume-Mansur Building there. This company is formed as a holding, financing and construction corporation for a system of standard-gauge interurban railroads connecting Rockport, Ind., with Western and Southwestern Kentucky and the South. The authorized capital is \$500,000, although it is understood that

the company possesses strong American, Canadian and foreign connections, which can provide ample capital for the developments to be undertaken.

H. C. Brubaker of Indianapolis is president; E. F. Wheaton, first vice-president in charge of the department of subsidiary corporations; W. A. Calhoun, C.E. and M.E., of Buffalo, N. Y., second vice-president and consulting engineer; John Francis of Cedar Rapids, Iowa, third vice-president and manager of securities department; H. P. Dew of Blacksburg, S. C., treasurer, and G. E. Bruce of Indianapolis, secretary. Hawkins & Hawkins of Indianapolis are general counsel.

The American Traction & Power Co. will, it is understood, handle the financing and construction of the Kentucky Southwestern Electric Railway, Light & Power Co. of Paducah, together with systems extending from Rockport to Bowling Green, Nortonville, Hopkinsville and Murray, Ky., as well as several projects now in their first stages of inception throughout this territory.

A New Signal Lamp on Trains.

The Missouri Pacific-Iron Mountain system is installing Fresnel signal lamps on the rear end of its trains. They are used on ships and steamboats. The Fresnel lamp gives a long, narrow belt of light with a spread of 45 degrees on either side of a central point, or a total illumination of 90 degrees. The ordinary signal lamp, while its light is bright, has no spread, throwing out only a thin line of illumination directly back of the train. The advantage of the wide spread of light is that in rounding a curve trains on the other turn of the curve can plainly see it, whereas they cannot observe the light of the ordinary train signal lamp. The Fresnel lens has been worked upon by numerous railroads desiring to use it, but there were mechanical problems connected with it that have now been overcome by B. H. Mann, chief signal engineer of the Missouri Pacific-Iron Mountain roads, who has succeeded in perfecting the lamp for railroad use. Service tests have been made recently on the Hot Springs Special and on both of the through fast trains to Texas. These have been most satisfactory, and arrangements are now being made to have the Fresnel lens signal lamp to take the place of all other signal lamps on all trains of the system.

New Equipment, Rails, Etc.

The Pennsylvania Railroad is reported to have ordered 15 passenger cars from the Standard Steel Car Co., Pittsburg, and an equal number from the American Car & Foundry Co., St. Louis.

President T. J. Freeman of the International & Great Northern Railroad is quoted saying that it has placed its orders for new equipment covering 20 heavy locomotives, 25 all-steel passenger cars and from 400 to 500 coal cars. The builders are not stated.

The Rock Island lines are reported in the market for 500 furniture cars and 250 flat cars. Specifications are prepared.

The Kentucky & Tennessee Railway is reported to have ordered a 10-wheel locomotive from the Baldwin Works, Philadelphia.

The Central of Georgia Railway, says a report from Birmingham, has ordered 30,000 tons of rails from the Tennessee Coal, Iron & Railroad Co. to be delivered as soon as possible.

The Standard Steel Car Co. is reported to have delivered 150 steel hopper cars on the order of 500 placed by the Western Maryland some time ago.

The Pennsylvania Railroad, says a market report, has placed orders for about 400 tons of steel for four small bridges.

Reported that the Pennsylvania will be in the market for tank cars.

The Wichita Falls Route, according to a dispatch from Wichita Falls, Tex., will purchase immediately 8 locomotives, passenger equipment sufficient for 2 trains, 300 freight cars, a number of flat cars and 8 cabooses.

The Southwestern Railway, Henrietta, Tex., says a dispatch from there, has just received 2 motor cars.

The St. Simon Railway Co., Brunswick, Ga., proposes to issue \$12,000 of bonds for equipment, according to a dispatch from there.

Mobile & Ohio Report.

The annual report of the Mobile & Ohio Railroad Co. for the year ended June 30 last exhibits operating revenue \$11,197,347, increase \$560,614; operating expenses \$7,893,806, increase \$483,020; net operating revenue \$3,303,541, increase \$77,594; operating income after deducting \$14,093 as deficit from outside operations and \$301,025 taxes \$2,988,242, increase \$85,340; total income \$3,218,430, increase \$85,648. From this there were made deductions of \$1,266,778 and interest payments of \$1,337,803, leaving a balance of \$613,849, increase \$61,263; balance after payment of dividends, \$371,025. Deducting from this \$8335 charged to additions and betterments, left a surplus of \$362,690. Total credit to profit and loss, \$4,705,551. The gross revenue was greater than for any other year in the history of the company. Freight revenue was \$8,151,293 and passenger revenue \$1,432,323. For maintenance of way and structures there was spent \$1,285,758, and for maintenance of equipment \$1,910,290.

Concerning the work at Mobile the report says that the facilities under construction will be completed about January 1 next, when the company will be in a position to offer ships berthing at its docks as great dispatch as that offered by any other port on the Gulf of Mexico.

Memphis & Pensacola.

W. P. Dickinson of Chicago, one of the promoters of the projected Memphis & Pensacola Railroad, is quoted in a report from Pensacola as saying: "We have ample financial backing, and it will take more than \$30,000,000 to finance the project to make it a certainty; all that we want is the right to enter Pensacola."

It is further alleged that C. D. Smith & Co. of Memphis will build the road, and Mr. Dickinson is reported as also saying that the 174 miles from Pensacola to Meridian can be finished within nine months. From Meridian the road will go right to Memphis, but there will be a branch from Ackerman, Miss., to Helena, Ark.

B. F. Plumb, another of the party, is reported as saying that the company will need right of way over certain streets in Pensacola, besides considerable waterfront property for the erection of two grain elevators, two cotton storage warehouses and a cold-storage plant in addition to the usual railroad shops and other buildings. This property will be required if Pensacola is to secure the road.

New Passenger Depot at Pensacola.

Plans are reported prepared for the proposed passenger depot of the Louisville & Nashville Railroad at Pensacola, Fla. It will be situated at the southeast corner of Wright and Alcaniz streets, where the company owns a strip of land 150 feet wide extending along Wright street for several blocks. The cost of the new station, it is said, will exceed \$250,000, and construction will begin before January 1. The depot building will consist of a two-story section 206 feet long and about 100

feet wide. Adjoining this will be a one-story section 60 feet long. The principal apartments include a main waiting-room 43x60 feet, ladies' waiting-room, 28x28 feet, colored people's waiting-room, 24x44 feet, besides the offices usual in a railway terminal. Quarters for officers of the road will be provided on the second floor. Besides the trackage for the terminal, there will be built a switching yard containing 44 tracks. The plans were prepared in the office of the chief engineer at Louisville, Ky.

Taloga, Putnam & Southern.

Charles Wesley Musgrove, Taloga, Okla., general manager of the proposed Taloga, Putnam & Southern Railroad, writes that he is the contractor for the projected line which is to run from Chickasha to Woodward, Okla., about 150 miles, via Putnam and South. There will be several bridges required, including a large one over the Washita River. The route lies through undulating country. Connections will be made with the Rock Island and the Frisco systems and the Kansas City, Mexico & Orient Railway. The company will need electric engines and other equipment. The incorporators include S. H. Whittenberg, president; Frank Waddel and F. M. Darby, vice-presidents; Charles Miller, treasurer; J. E. Ruble, secretary; Charles W. Musgrove, general manager; Geo. W. Kouns, I. M. Willey, Geo. Sowers, Net Stidham, C. S. Dunn, Perry Skelton, Charles Miller and William Phelps.

Kansas City Southern's Year.

The Kansas City Southern Railroad Co. reports for the fiscal year ended June 30, 1911, gross earnings from operation \$9,965,174, increase as compared with last year \$400,522; operating expenses \$6,404,001, increase \$135,416; net earnings \$3,561,173, increase \$265,106; operating income after payment of taxes \$3,229,298, increase \$247,004; total income \$2,359,759, increase \$283,011; balance after payment of interest, rentals, etc., \$1,064,659, increase \$173,238; surplus after payment of preferred dividends \$824,659, increase \$173,238; total surplus \$4,587,062, increase \$490,218.

During the year the company made arrangements to build a first-class passenger depot at Fort Smith, Ark., and contracts for its construction have been awarded. It spent for other additions and improvements \$3,126,107.

Washington & Old Dominion.

A report from Richmond, Va., says that the Bluemont branch of the Southern Railway, extending from Alexandria to Bluemont, Va., 39 miles, has been leased by the Washington & Old Dominion Railway Co., which proposes to build a line from Washington, D. C., to Winchester, Va., about 60 miles, with branches, making a total of 90 miles of lines. Charles M. Hendley, 1517 H street N. W., Washington, is president of the company, which, it is further said, has acquired the line of the Great Falls & Old Dominion Railway, about 15 miles long. It is understood that the line leased from the Southern will be electrified and operated by the trolley system. These lines are to be connected, it appears, and extensions made to the points it is desired to reach.

Heavy Freight Movement.

The freight movement on the Missouri Pacific-Iron Mountain route has shown a decided increase lately. The largest movement in its history occurred Friday, October 6, when 13,309 loaded cars were handled, and there were only five cars on the entire 7300 miles of track which had

been standing over 24 hours without movement. The following day, Saturday, there was not a single car on the entire system which had stood 24 hours, and the freight movement was nearly as great. The largest single day's loading occurred Monday, October 9, when 3415 cars were loaded on the Missouri Pacific-Iron Mountain tracks. This is exclusive of a few thousand cars received from other lines.

The Frisco's Statement.

The St. Louis & San Francisco Railroad Co. is reported to have submitted a statement to the New York Stock Exchange covering the income account for the fiscal year ended June 30 last, but not including the Chicago & Eastern Illinois Railroad. It shows for 1911 operating revenues, \$43,159,227; operating expenses, \$29,320,400; net operating revenue, \$13,838,827; taxes, \$1,811,827; operating income, \$12,027,000; total income, \$14,360,971; surplus, \$1,335,662. For 1910 the operating revenues were \$41,165,939; operating expenses, \$28,676,842; net operating revenue, \$12,489,097; total income, \$13,331,340, and surplus, \$922,217.

Galveston-Houston Interurban.

An officer of the Blodgett Construction Co., which has the contract for the causeway at Galveston, Tex., is quoted as saying that the work may be completed in time for the Galveston & Houston Interurban Railway to be operated by November 1. The last concrete work on the arched portion of the causeway is reported finished, and the work of filling in the arches to make the railroad grade is progressing. The railway company is also pushing work, and will be ready to lay tracks over the causeway as soon as the roadbed thereon is in condition.

Railroad Notes.

The Louisville & Nashville Railroad, it is reported, contemplates establishing its own telegraph system over its lines for railroad purposes, but also for commercial business.

The Baltimore & Ohio Railroad, the Cincinnati, Hamilton & Dayton Railroad and the Raritan River Railroad have recently ordered telephone train dispatching equipments from the Western Electric Co.

It is again reported in a dispatch from Austin, Tex., that the Missouri, Kansas & Texas Railway has purchased the lines known as the Wichita Falls Route in Texas and Oklahoma. This report was denied some time ago.

The South Carolina Western Railway Co., of which W. R. Bonsal, Hamlet, N. C., is president, announces its plan to build a line from Hartsville to Lydia, Bishopville and Sumter, S. C., with a branch from Lydia to Timmonsville.

The Iron Mountain system is reported to have put in operation 13 miles more of double track in Arkansas, this being an addition to the line from Baring Cross to Double-Track Junction. This gives about 30 miles of double track approaching Little Rock.

It is rumored that A. B. Leach & Co. of New York are endeavoring to purchase the Macon (Ga.) Railway & Light Co., of which W. J. Massee is president. Mr. Massee has been prominently interested in the movement to build an interurban railway between Atlanta and Macon.

A dispatch from St. Augustine says that the Florida East Coast Railway will install a telephone system all along its lines for auxiliary use in connection with the telegraph in dispatching trains. It is further said that every station will have a telephone.

MINING

BREAKS POTTERY RECORD.

Production for 1910 Greatest in History of Industry.

West Virginia ranked third among the States in 1910 in the manufacture of pottery of various kinds, an industry that has grown to be enormous in the United States, and it was in a highly prosperous condition in 1910, according to a report by Jefferson Middleton, just published by the United States Geological Survey. The product was valued at \$33,784,678, a gain of \$2,735,237, or 8.81 per cent., over the figures for 1909. This is the greatest value ever reached, exceeding by \$2,343,794 the record figures for 1906. Compared with earlier years, the increase is yet more striking. In 1899 the value of the pottery products of the United States was \$17,250,250. The product for 1910 was greater by \$16,534,420, a gain of 95.85 per cent. During the same period the imports increased 40.73 per cent.

The pottery products of the United States, as classified by Mr. Middleton, consist of red earthenware (flower pots); yellow and Rockingham ware (culinary utensils, teapots, etc.); cream-colored ware, white granite ware, semi-porcelain and semi-vitreous ware, and china in its various forms (general household wares, such as tableware, toilet sets, etc.); sanitary ware (bathtubs, lavatories, wash-tubs, etc.), and miscellaneous wares, including art pottery made under various trade names, chemical pottery, jardinières, pins, stilts, and spurs for potters' use, porcelain door knobs, porcelain hardware trimmings, porcelain lighting appliances, smoking pipes, toy marbles, turpentine cups, umbrella stands, filter stones and tubes, and shuttle eyes and thread guides.

The product of most importance is white ware, which includes general household ware, though it is produced in only eight States. This product was valued at \$14,780,980 in 1910, compared with \$13,728,316 in 1909. Ohio was the leading producer, reporting a value of \$9,730,408 for 1910. West Virginia was second and New Jersey third. White ware composed 43.75 per cent. of all pottery products.

China ware, the highest grade of general ware, though comparatively small in value of production (\$1,962,126 in 1910), showed a gain of \$195,306 in 1910. It was produced in but three States in that year. New Jersey was the leading State, reporting ware valued at \$1,131,412. New York was second and Pennsylvania third. China constituted 5.81 per cent. of all pottery products in 1910.

Sanitary ware was valued at \$6,758,996 in 1910, which was a gain of \$769,701 over 1909. It was produced in nine States. New Jersey was by far the largest producer, the value of its output being \$4,955,066. West Virginia was second and Indiana third. Sanitary ware formed 20 per cent. of the value of all pottery products.

Porcelain electrical supplies were produced in 10 States in 1910, of which Ohio was the leader, reporting ware valued at \$1,277,144. These wares composed 11.23 per cent. of the total value of pottery products.

Red earthenware was made in 33 States to the value of \$854,196, Pennsylvania being the largest producer. Ohio was second and Massachusetts third.

Stoneware and yellow ware and Rockingham ware were valued at \$3,796,688, and were made in 28 States. This is the only branch of pottery production that showed a decrease in 1910. Ohio, as for many years, was the leading State in the manufacture of these wares, reporting

43.84 per cent. of the total. Illinois was second and Pennsylvania third.

Ohio is the leading pottery-producing State in the Union, reporting a value in 1910 of \$14,794,712, or 42.31 per cent. of the whole. New Jersey was second, with wares worth \$8,588,455, or 25.42 per cent. of the total. West Virginia was third, with wares valued at \$2,675,588. The five leading States—Ohio, New Jersey, West Virginia, Pennsylvania and New York—produced 88.60 per cent. of the total.

Utilizing Waste Coal.

An illustration of the feasibility of using waste coal for power purposes has just been given in Hull, England, one of the new patent water-tube boilers having been installed in an oil mill in that city, is reported by Consul Walter C. Hamm of that city. The success of a public exhibition given shows, it is claimed, that much coal which has heretofore been rejected as worthless can be used, and that greater efficiency can be obtained from this waste coal by the new method than from the best coal by the old method.

The system employs the known principle that almost perfect combustion can be obtained by mixing air in proper quantities with pulverized coal before the latter is introduced into a furnace. This insures better combustion with less air than usual, and with a consequent increase of boiler efficiency by reducing the amount of heat carried away by the escaping gases. The results obtained with the poorest kind of fuel are claimed to be as follows:

(a) The almost total elimination of losses, as all the fuel is burned in suspension, the amount of unconsumed coal in the furnace at any given time being infinitesimal.

(b) The rapidity with which steam is raised under ordinary conditions. The system differs from others, in that with ordinary furnaces some time is taken before the fires are completely alight, but in this case as soon as the boiler is fired theoretically full effect is obtained.

(c) The smallest and cheapest kinds of "slack" are burned with ease, and high efficiencies are obtained.

(d) The arrangements which permit a close inspection of the straight vertical tubes.

(e) The reduction of supervision necessary.

Coal dust costing \$1.25 a ton, which could not be utilized in any other way, was burned under this boiler and gave equal efficiency as compared with coal costing \$2.50 a ton and used with the old style of boiler. The boiler can be started and stopped, by holding the fire up, in one minute. In 26 minutes a steam pressure of 180 pounds can be obtained, whereas it takes about four hours to fire a boiler of the old style. At mealtimes the fire can be cut off and a great saving of coal effected. An additional advantage is that the space occupied by the boiler is considerably less than that required for the ordinary boiler.

GYPSUM INDUSTRY IMPORTANT.

More Than \$6,500,000 Worth Produced in 1910.

The importance of the gypsum industry in the United States is shown by figures compiled by E. F. Burchard of the United States Geological Survey. For 1910 the value of gypsum products was \$6,574,478 and the amount of gypsum mined 2,375,394 short tons. This was an increase over the figures for 1909 of more than 5 per cent. in tonnage and more than 10 per cent. in value. Our gypsum industry is independent of foreign sources, for the

value of the imports in 1910 amounted to only \$502,111, or less than 8 per cent. of the domestic output.

New York was the largest producer of gypsum, with an output valued at \$1,153,977, an increase of \$121,327 over 1909. Iowa came second, with a value of \$943,849, and Michigan third, with \$668,201.

The bulk of the gypsum produced was manufactured by grinding and partial or complete calcination into plaster of Paris, molding and casting plaster, stucco, cement plaster, fibred plaster, plaster boards, flooring plaster and hard-finish plaster. The best known hard-finish, anhydrous plaster is Keene's cement, which sets very white and hard. It is used as a backing and surface for artificial marble and for ornamental moldings and castings, and its use as a wall plaster is increasing.

Refined grades of plaster are used in dental work; also as cement for plate glass during grinding, for making pottery molds, stereotype molds and molds for rubber stamps, and as an ingredient in patent cements. A large quantity of gypsum is used in the raw state as a retarder in Portland cement. Considerable quantities are ground without burning and used as land plaster or in fertilizers. Smaller quantities are used unburned in the manufacture of crayons, paper, imitation meerschaum and ivory, calcimines, water paints and tints and dry colors, notably Venetian reds. When used in excess in mixed paints, gypsum is regarded as an adulterant. The unburned and dead-burned forms of gypsum may be used to a certain extent with oil paints, because they are not very active chemically.

East of Mississippi River the gypsum-producing localities are confined to areas in Michigan, Northern Ohio, central and Western New York, and Southwestern Virginia. West of the Mississippi deposits of gypsum are both numerous and widely distributed. The material is mined in Alaska and in the Western States of Arizona, California, Colorado, Idaho, Iowa, Kansas, Montana, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Texas, Utah and Wyoming. Plaster mills are in operation in at least 14 of these States. The Alaska gypsum is shipped to Tacoma, Wash., where it is prepared for the market.

Mr. Burchard's report, which contains a map showing the location of gypsum plants in operation in 1910, may be obtained free of charge from the director, United States Geological Survey, Washington, D. C.

American Sulphur Production.

The United States produced 255,534 long tons of sulphur in 1910, valued at \$4,605,112, according to figures compiled by W. C. Phalen of the United States Geological Survey, and just published as an advance chapter from "Mineral Resources." This is an increase of 16,222 tons in quantity and \$173,046 in value over the output for 1909.

The sulphur industry in this country is substantially an American one, for the imports for 1910 were valued at only \$558,611, while the exports amounted to \$552,941. Four States—Louisiana, Nevada, Utah and Wyoming—produced practically all of our sulphur. Mr. Phalen discussed the geologic occurrence and technology of sulphur in the 1909 chapter of "Mineral Resources." In the chapter for 1910 he gives a detailed account of the important foreign sulphur deposits—those of Italy, Japan and other countries.

The report also contains the statistics of production of pyrite in the United States, which in 1910 amounted to 238,154 long tons, valued at \$958,608. The imports of this mineral were largely in excess of the domestic production, being

803,551 long tons in 1910, valued at \$2,748,647. A copy of the report on the production of sulphur and pyrite in 1910 can be had on application to the director of the United States Geological Survey, Washington, D. C.

Erecting Tipple and Other Structures

The Milby & Dow Coal & Mining Co., main office at Houston, Tex., awarded contracts for the erection of a coal tipple and other facilities at Dow, Okla., which were recently burned. A wooden tipple 200 feet, engine-house 30x30 feet and boiler-house 30x40 feet, fireproof and ordinary construction, will be erected. Bids will be opened November 15 for a three-track shaker screen for screening slack, nut and lump coal. Brent E. Clark of Dow is the architect, and Hugh Sample of Harts-horne, Okla., is the contractor. The Milby & Dow company produces about 500 tons of hard bituminous coal daily.

TEXTILES

Henry River Company.

The Henry River Manufacturing Co. of Hildebran, N. C., plans to take up an indebtedness and improve its plant in future in connection with its recent increase of capital stock. This company has about 600 acres of land and buildings of modern mill construction, with an equipment of 8000 producing spindles and 4160 twister spindles. It is located on Henry's Fork River, where it developed a water-power to drive its machinery. The increase of capitalization is from \$112,800 to \$157,800, an addition of \$45,000.

The Cotton Movement.

In his report for October 13 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 43 days of the present season was 2,681,750 bales, an increase over the same period last year of 583,257 bales. The exports were 1,429,754 bales, an increase of 357,219 bales. The takings were, by Northern spinners, 201,934 bales, a decrease of 17,199 bales; by Southern spinners, 283,508 bales, an increase of 25,489 bales.

Chester Knitting Mills.

The Chester Knitting Mills of Chester, Ill., J. H. Rickman, president, is reported as arranging to lease a building in St. Louis, Mo., for the purpose of consolidating three plants at present operating at Chester, Pinckneyville and Sparta. It is stated that the equipment from these plants will be removed to St. Louis and will be installed for a daily production of 1000 pairs of hose.

The Florence Mills

The Florence Mills of Forest City, N. C., will, it is reported, install finishing machinery for chambrays, which have heretofore been finished at Fall River, Mass. This is a \$250,000 company, operating 15,000 ring spindles, 704 twister spindles, 200 each of broad and narrow looms, and other equipment on the production of yarns, flannels, chambrays, etc.

To Install Electric Drive.

The Capps Cotton Mill of Toccoa, Ga., C. H. Dance, president, is reported as contemplating the construction of another dam on Upper Toccoa Creek for power purposes and installing electrical drive in its plant, motors for which have been purchased. It is announced that the plant will soon resume operations.

The Brenham Cotton Mills will reorganize as the Lone Star Cotton Mills, and are reported as to resume operations soon.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

To Represent American Manufacturers.

Crondiras & Costi, P. O. Box 1226, Alexandria, Egypt, writes to the MANUFACTURERS RECORD:

"We are representative agents; offer the articles of the manufacturers which confine us their interests; book orders under the conditions stipulated by them, and when transactions are cleared they pay us the commission agreed upon. We import for our own account only in the view to introduce new marks, which is necessary in this country, as the wholesale merchants do not order for articles of unknown marks; for this we are obliged to import for our own account, which we distribute to the retailers, which prefer to buy in proportion of their sales. Here would be a very good field for American products; no industry very low, entrance duties only 8½ per cent., but transactions may be helped by credit, as capitalists here want too much by lending to the peasants, so the interest is somewhat high for merchants; besides this, the continent's manufacturers having adopted the term of four months acceptance, it is rather difficult to get orders on cash basis, except on fast sale goods. We are representing a good many American manufacturers, and in time we hope to get more marks. Our country has a large import on viands, lards, canned goods, preserves, coconut oil, bleached oil, writing paper, candles, biscuits, cottonseed oil, soaps, perfumes, cotton yarns, printing and packing paper, sewing cottons, hardware. We think that our information, combined with our long experience, would give all necessary explanation about how business between States and this country can be developed. It is true that it is far, but we receive goods from the States in less time than from Hamburg."

Machinery for Sawdust Briquettes.

Arthur Holliday, American Consulate, Sydney, Australia, writes as follows to Don Farnsworth, 125 Monroe street, Chicago, Ill., who sends his letter to the MANUFACTURERS RECORD:

"I will be very grateful to you if you will ascertain for me the kind of machinery used to make briquettes of sawdust. I understand they are mixing sawdust with some sort of a mixture of tar or something of the sort then putting it under high pressure in the machines to make it stick together and hold the shape given. This is used for fuel, and I understand makes good fuel, and very cheap. If you will have concerns making this machinery send me their catalogues, together with prices, weights, etc., it will no doubt be some good business to them. The next important thing is the ingredients of the liquid mixed with the sawdust which is inflammable, and is yet not expensive. The formulae no doubt go with the machines. Ascertain this point if possible."

Brass Beds, Steel Products, Etc.

Max Low, 1985 Seventh avenue, New York city, writes to the MANUFACTURERS RECORD:

"It is my desire to establish myself in Argentine as representative of United States concerns anxious to do business

there. The articles I am interested in are brass beds, portable oil heaters (ornamental), steel products and binder twine. These are some of the few articles in which the United States trade can meet German and British competition successfully, and the possibilities are excellent for one who, like myself, has perseverance and knows the three commercially in Argentine's very important language—Spanish, English and German. I would like to hear from parties interested."

Adding and Other Machines.

L. Bianchi-Milella, Bologna, Italy, writes to the MANUFACTURERS RECORD:

"Without losing any time I am going to take advantage of your kind offer and ask you to put me in communication with the Adder Machine Co., with whose address I am not acquainted. I would like very much if possible to become the agent of various houses manufacturing machines of all kinds."

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Timber Deal in North Carolina.

Messrs. Campbell and Dickey of the United States Spruce Co. of Marion, Va., purchased about 8000 acres of timber lands near Black Mountain, N. C., for development. The property is estimated to cut 303,000,000 feet of saw timber and 56,000 cords of pulpwood, the purchase price being \$857,000. It is announced that the purchasers will install a sawmill of 100,000 feet daily capacity, erect a pulp plant of 40 cords daily capacity and construct a 16-mile narrow-gauge railway from Asheville to Mt. Mitchell, for which the survey has been completed. The plant and railway will cost about \$200,000. The property was purchased from S. Montgomery Smith of Asheville, F. H. Drewry and Marcus L. Foster of Massachusetts.

Will Erect Creosoting Plant.

The Western Lumber & Creosoting Co., 905 Praetorian Building, Dallas, Tex., which was recently incorporated with a capital stock of \$50,000, will establish a fireproof creosoting plant of 5000 cubic feet daily capacity. Construction will be done by day labor, and equipment of the plant will consist of tanks, boilers, pumps, retorts, tram cars, block cages, etc. Vice-President R. W. Yarbrough of the company is engineer in charge. Other officers include J. J. Marshall, president and manager, and L. M. Washburn, secretary.

Will Cut by Contract.

M. V. Gress of the Gress Manufacturing Co., Jacksonville, which was recently reported as to have purchased standing timber near Fivoy, Fla., states that the Aripeka sawmills have discontinued operations at Fivoy and have turned over to the Hart Lumber Co., which will locate at Tampa, the timber to have cut. The Hart company will install several small sawmills to develop the timber and market the lumber through Tampa. The timber will be cut on contract, and is estimated at 250,000,000 feet.

Lumber Notes.

James G. Miller of St. Louis and J. K. Carlyle of Chicago contemplate purchasing 10,000 acres of timber lands near Enterprise, Miss., and establishing saw and planing mills, box factory, etc.

The O'Leary Mill Co. of Moss Point, Miss., purchased about 5,000,000 feet of standing timber in Jackson county, and will manufacture it into lumber at its Moss Point mill.

MECHANICAL

A Cottonseed Culler.

Editor *Manufacturers Record*:

My attention has recently been directed to an invention which is destined mightily to affect the production of cotton in the South, and, knowing your profound interest in this subject, I venture briefly to call attention to it. With the growth of interest in cotton, together with interest in its increased production, it is not a matter of surprise that means are being found for the promotion of this staple. Among these agencies may be named a machine which has been invented for the selection of seed, which machine I have seen, and the results of the work of which I have learned.

The machine, which is called the cottonseed culler, is a most simple arrangement for separating the heavier and healthier seed from the dwarfish and light ones, and by this means affording the planter only the best with which to sow. The inventor, an extremely practical man, has not been unduly hasty in bringing his machine into notice, but has been demonstrating for four seasons the results of his selection of seed. Nor have the experiments been confined to his own efforts, but many throughout the South have made experiments with exceptional satisfaction. The results have been a yield extending from 30 to 100 per cent. in excess of previous production. Not only is this true, but by reason of the superiority of the seed, there has been a corresponding valuation in the staple. I have seen some of the results, and while perfectly natural, they are astonishing.

That this simple contrivance will produce a revolution in the production of cotton in the States of the South seems now inevitable. As relating to cotton, nothing approximating it has appeared since the invention of the gin. Mr. O. H. Franklin of Birmingham, Ala., is the successful inventor. A partial publication of the results of his machine has been the occasion of his being overwhelmed with correspondence with planters from every part of the South. While the general public has been all along unaware of a machine of so marvelous power, the inventor has for years been demonstrating its efficiency in many parts of the South by inducing hundreds of farmers to test the value of the machine. In every possible and practical way the machine has been tested, and in no instance failed. Feeling assured that you would be interested in a machine so conducive to the production of cotton, I venture thus to call attention to it in the pages of the *MANUFACTURERS RECORD*.

This machine, known as the Bowers & Franklin Cottonseed Culler, is now being manufactured and shipped throughout the cotton-growing States under the direction of the Cottonseed and Cotton Improvement Association of Birmingham, Ala. Rarely has so much interest been awakened among planters as has been by this wonderful machine, which is destined to become a great public benefaction.

B. F. RILEY.

New Shimer Tools.

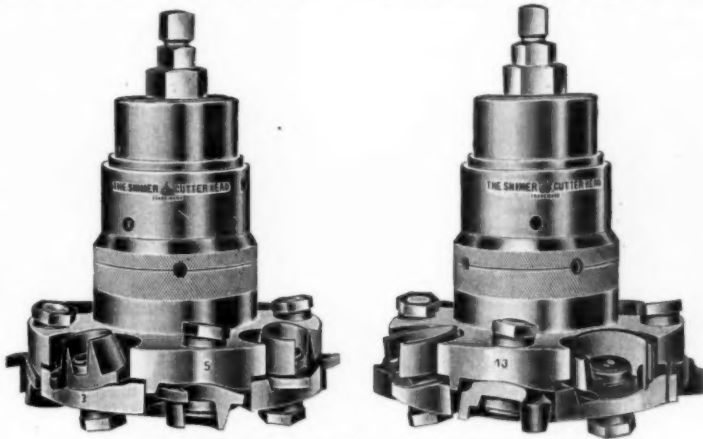
To match flooring at the rate of 150 to 170 linear feet per minute requires side-heads of special construction. They must have great strength to stand the centrifugal strains, must have a perfect balance, and the bits must all do their share of the cutting.

These special requirements are incorporated in the new "Shimer Limited" cutter head put on the market by Messrs. Samuel J. Shimer & Sons, Milton, Pa. In constructing this new design of head the vital

points of the regular Shimer cutter heads have been retained. The new head differs from the familiar patterns in the method of attaching them to the spindle; in the construction of the bit seats and of the bit designed for faster cutting; in the greater strength of the holding bolts, and especially in the self-centering device which clings to the spindle when drawn up, securing it firmly thereto.

The spindle gripping device is positive and effective in its purpose of holding fast to the spindle, as also in centering the head for a more uniform action of the

their other makes as well. This machine, with the use of files, joints the edge of the bits to bring them within a common cutting radius, so that each knife edge does an equal share of the cutting. Its use will improve the quality of work done and enable the operator to increase machine feeds. The machine is also made with tracking attachment for setting the bits before jointing, and it can be used as a filing stand for holding the heads while being sharpened with a file. The stub is ground to exact size of matcher spindles, and all parts are carefully tooled, making



THE NEW "SHIMER LIMITED" CUTTER HEADS.

cutters. This is accomplished by having the central bore of the head tapered and having a rotatable cap and nut fitted in the upper portion. Into this bore a taper collet projects, having an upper threaded portion fitting the rotatable nut. When the top nut is drawn up the collet contracts and binds itself firmly to the spindle. This device is simple and effective, and one not likely to get out of order. The various parts are made of steel forgings, and the collets are hardened and ground true to size. The entire construction of this tool is of the best, both in workmanship and material.

The bit seats carry a larger surface, and the bit chambers are of greater depth, to compensate for the new acute angle given to the bits for greater relief to the

the machine a very useful adjunct to the planing mill.

Further information and literature will be sent on request.

Edwards' Pressed Steel Ceilings in Afghanistan.

An illustration of one of the features of the extensive order recently received by the Edwards Manufacturing Co., Cincinnati, as noted in a previous issue of the *MANUFACTURERS RECORD*, for pressed steel ceilings, side walls and roofing for the Palace of the Ameer of Afghanistan at Kabul, is shown herewith. This illustration shows one of the details of the ceiling, it being one of the ventilating centers which are installed in four of the



ITALIAN RENAISSANCE VENTILATING CENTER.

parts coming in contact with the lumber. The holding bolts have been strengthened several times over by the use of a high-grade steel especially made for the purpose.

These heads are made either solid or with the expansion feature, as may be preferred. All cutters are preferably made of high quality tool steel tempered to file. They hold an edge for any hard lumber for five hours, and in many instances for a ten hours' run.

In this connection the makers have also brought out a cutter head jointing machine, which is not only suitable for the new heads, but which has been adapted to

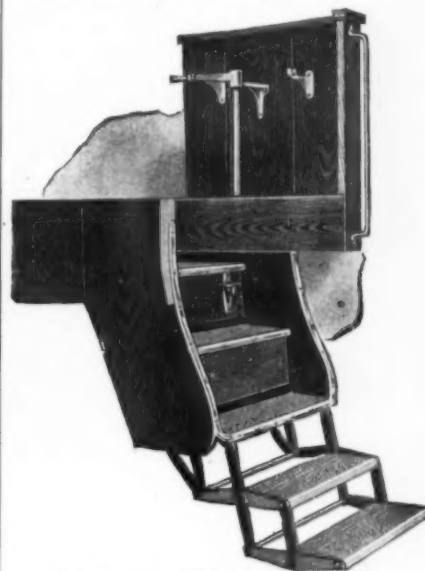
palace rooms. It is of Italian renaissance design, 72 inches in diameter and 3 feet deep, giving a perfect ventilation to the room and adding an attractive appearance to that afforded by the ceiling. This order shows that the Edwards Manufacturing Co. is known in foreign countries as well as in the United States as the "sheet-metal folks."

The Blake Car Step.

The Blake Car Step Works, Charlotte, N. C., is manufacturing the new car step invented and patented by John S. Blake of that city.

The accompanying illustrations show

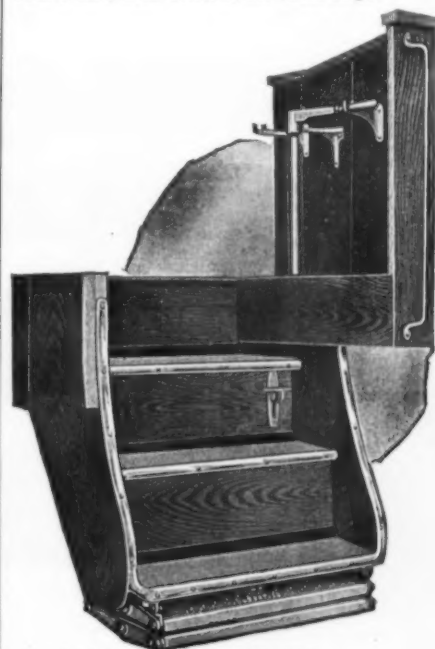
the step extended for use and also folded out of the way when the car is in motion. It is made of aluminum, brass and steel. This device is for the purpose of saving persons from injury when getting on and off trains, as is likely to occur with the stool or box in use before this invention was presented to the attention of railroad train managements. The step weighs 30 pounds, and can be placed on any passenger coach platform with little difficulty or expense. As may be seen from the illus-



BLAKE CAR STEP LOWERED.

tration, the step is operated from the platform of the train by a lever. A foot release, indicated on the top step in the illustration, is attached to prevent accidental release by passengers.

The invention of this step is the result of a serious sprain received by Mr. Blake when stepping up to the platform of a car by means of the ordinary stool or box as provided by car porters at some stations. Orders have been received for these steps



BLAKE CAR STEP CLOSED.

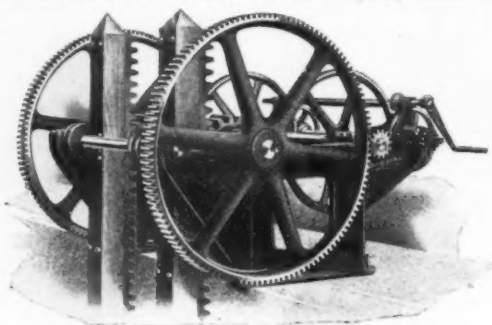
from some of the leading railroads of the country.

Head-Gate Hoists for a Tennessee Hydro-Electric Development.

The accompanying illustration shows a double-stem heavy compound geared head-gate hoisting mechanism, known as type No. 7, built by the Dayton Globe Iron Works Co., Dayton, O. This company has been furnishing during the past year the head-gate hoists for a number of the principal hydro-electric developments, including the Southern Power Co., Charlotte,

N. C.; the Cumberland Construction Co., Barr Mills, Maine; the Peninsular Power Co., Iron Mountain, Mich., and are now making a shipment of 10 complete hoists to Ocoee, Tenn.

These 10 hoists are of a design similar to the accompanying illustration, except that in place of timber stem gates they are fitted with steel stems, made of nine-inch channel beams and eight-inch I-beams. The spur-rack meshing in the pinions on the hoisting mechanism is bolted to the flat side of the channel in the steel stem, and the upper sections of the rack, as well as the pinions meshing therein, are of cast steel. All of the gates are of timber construction, and the hoist-



HEAD-GATE HOIST FOR WATER-POWER PLANT.

ing mechanisms are operated by a Westinghouse motor of 11-horse-power capacity. Each of the exciter gates is operated by means of an independent motor of the Westinghouse make of five horse-power. The large gates are 10 inches thick, and the small gates 6 inches thick, the large gates being bronze-faced. Each main unit hoisting mechanism, which comprises two No. 7 hoists, has 60 tons lifting capacity, or 30 tons per hoist, while the exciter hoist has 20 tons lifting capacity.

The gate stems are of such length as to place the hoisting mechanism on an elevation approximately 33 feet above the center of the main gate openings, which is 32 feet above the center of the exciter gate openings, these openings being located 25

feet and 24 feet, respectively, below the crest or spillway of the dam and 35 feet and 34 feet, respectively, below the maximum full-water elevation. The gate hoists are provided for either hand operation or motor operation, and are equipped complete with limit switches and brakes, so that either set of gates may be operated independently.

The Humason Rail Joint.

A rail joint designed to so unite the consecutive rails of railroad tracks, street-car tracks, etc., that the joined rails will act as one continuous rail has been invented by G. A. Humason of Shreveport, La. The patent was allowed on the 10th

inst. It is well known that with the present system of rail joints each rail is considerably deflected downward when the great weight of the engine or car approaches the joint. This deflection results in the wheels striking the end of the next rail a considerable blow, which is evidenced in the successive thumping sounds noticed when a train is passing an observer beside the track as each car passes over the jointed ends of the rails. This deflection can easily be seen when a train is passing slowly. The accompanying illustration shows the method of overcoming this difficulty. The Humason rail joint as shown so supports the ends that they are both equally deflected, and therefore

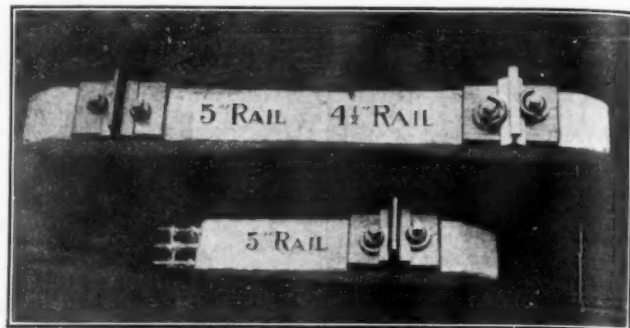
a practically continuous smooth-running railroad track results. The splice bars are made as shown in the illustration, and are secured in place similarly to the ordinary splice bar in use on railroad joints. The lug, passing through from one splice bar to the supporting recess in the other, effectually joins the two rails and at the same time permits of expansion and contraction in the rails. Inquiry among the manufacturers of rails has elicited the information that the rails and splice bars can be turned out at a very slight expense above that of the ordinary rail and splice bar. A slight modification of the rail joint is shown in the lower view in the illustration. This is the Humason interlocking joint, and gives additional strength

and stiffness at points requiring special treatment, as on sharp curves, etc.

The Humason Rail Joint Co. has been organized at Shreveport, La., for the manufacture and sale of these patent splice bars. The company is composed of prominent citizens of Shreveport, including Dr. J. C. Willis, president, former Governor and United States Senator Blanchard, Dr. J. L. Kimbell and J. M. Smith, former treasurer of Louisiana, and C. P. Munday, secretary.

Tests of these joints were recently made at the Washington Navy-yard under conditions similar to those in use by the leading railway systems at the Watertown arsenal in April, 1910, and according to

specifications for test as furnished by the rail committee of the American Railway and Maintenance of Way Association. The tests were made with both the straight joint and the interlocking joint for rails of 85 pounds per yard. The strength under vertical pressure applied at the ends of the rails was found to be practically the same with the two joints. The interlocking joint, with 30-inch splice bars and only four bolts, weighing in all only 60 pounds, showed at the load of 32,000 pounds a deflection of only .064 inch. The test was



THE PERCIVAL REINFORCED CONCRETE RAILROAD TIE.

terminated at a pressure of \$4,600 pounds by the shearing of a defective bolt, with no cracks or undue strain showing in the splice bars. This test is claimed to have given much better results than the similar tests on other patented splice-bar joints at the Watertown arsenal. Arrangements are being made for actual track tests of the joints by leading railway systems both in the North and South. As soon as these have been concluded the company expects to have the joints ready for commercial use.

Reinforced Concrete Railroad Ties.

A reinforced concrete tie for use on railroads, street railways, etc., which is claimed to have withstood every test to which it has been subjected is being manufactured under the patents of the inventor, H. E. Percival, by the Universal Concrete Tie Co., Whitney-Central Building, New Orleans.

The general style of the tie is shown in the accompanying illustration. Railroad-construction engineers have for years been experimenting with various expedients for overcoming the use of timber ties in railroad building owing to the limited life of timber ties and the increasing scarcity of suitable tie timber and the corresponding increasing cost of these ties. Concrete ties made under the "Percival patents" have been used on railroads, notably on the Florida East Coast Railway, as early as 1906; on the Galveston, Houston & San Antonio Railroad, and on the Houston street railway constructed by Stone & Webster of Boston.

The Percival tie is V-shaped, which makes it a "self-tamper," and ample strength is provided in the disposition of reinforcing bars thus permitted. It is fireproof, insect-proof and will not corrode, since there is no steel exposed. The rail is fastened with screw spikes in babbett screw sockets set in the tie while the tie is being molded, four fastenings to each tie. This fastening has been found by engineers to be effective in practical use. It prevents anything from working loose, and it is claimed that rail-spreading with this tie and fastening is practically impossible. Each tie is nine inches deep, nine inches face and eight feet long. It can be manufactured along the line of the railroad near where it is to be used.

The inventors point to the present condition of ties in use as showing the opportunities now offered by the Universal Concrete Tie Co. for the general introduction

of a good, substantial and practical railroad tie of long life and simple construction.

The first actual work in the development of the Percival concrete tie was commenced at Galveston in 1903. Since that time it has become recognized for its many advantages as a practical railroad tie.

M. W. Carrico is manager of the Universal Concrete Tie Co., and H. E. Percival, the inventor and patentee, is the superintendent of construction. Many railroad officials and others who have seen

this tie in use and under construction have written letters and reports enthusiastically endorsing it as a thoroughly practical tie for railroad use.

A Representative Weber Chimney.

The accompanying illustration shows one of the reinforced concrete chimneys constructed by the Weber Chimney Co. of Chicago, recently referred to in the MANUFACTURERS RECORD as having with-



WEBER CHIMNEY AFTER CHARLESTON HURRICANE.

stood the 125-mile-an-hour hurricane that passed over Charleston, S. C.

This chimney was built for the E. P. Burton Lumber Co., Charleston, with a height of 165 feet and inside diameter at top of 6 feet 6 inches. These chimneys are guaranteed to withstand a wind velocity of 100 miles per hour, but all of the Weber chimneys in Charleston withstood the 125-mile-per-hour hurricane without injury of any kind.

To Erect Fertilizer Plant.

The Coe-Mortimer Company, M. H. Grace, president, 51 Chambers street, New York, is reported to have purchased 25 acres of land on Cooper River near Charleston, S. C., for the erection of an extensive fertilizer plant and dock facilities. In connection with the enterprise the company writes to the MANUFACTURERS RECORD that it has no details to announce at this time. T. D. Darlington of Charleston is the Southern manager.

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Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "it is reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription to the Daily Bulletin is included for the contract period.

BRIDGES, CULVERTS, VIADUCTS

Ala., Birmingham.—Jefferson county will construct 10 bridges; bids received until October 23; J. W. Gwin, County Engineer, 103 Courthouse. (See "Machinery Wanted.")

Ark., Pine Bluff.—Hedrick & Cochrane, consulting engineers, 1118 McGee St., Kansas City, Mo., state they are making preliminary surveys for bridge. Pending legal action Jefferson County Bridge Commission has no plans ready for announcement; in preliminary stage. (Recently noted.)

Ark., Texarkana.—St. Louis Southwestern Railway, C. D. Purdon, chief engineer, Tyler, Tex., and other railroads are arranging for construction of proposed Oak St. viaduct.

La., Bermuda.—Natchitoches parish will expend \$8000 to construct three 96 foot spans on reinforced-concrete piers over Cane River; Ira W. Sylvester, engineer, Alexandria, La.; contract recently noted awarded to Austin Bros., Dallas, Tex.

La., Raceland.—M. S. Hasie Constructing Co., Dallas, Tex., has contract to construct bridge across Bayou Lafourche; steel; total length 214 feet; span of 70 feet; 15 feet above water; 16 feet wide; J. T. Campbell of company will be in charge.

Miss., Lexington.—Holmes County Supervisors awarded contract to W. T. Young Bridge Co. to construct steel bridge over Bophumpa Creek on Lexington and Acona Rd.; P. Williams, Chancery Clerk. (Call for bids lately noted.)

Mo., Joplin.—Kansas City Southern Rail-

way, C. E. Johnston, chief engineer, Kansas City, Mo., will build concrete and steel viaduct at Hopkins' curve; cost \$16,000.

N. C., Charlotte.—Mecklenburg county will erect bridge over Long Creek on Rozzell's Ferry Rd. Address County Commissioners.

Okla., Bristow.—Kay county awarded contract to Canton Bridge Co., Canton, O., to construct bridge over river two miles from Bristow.

Okla., Tologla.—Tologla, Putnam & Southern Railroad, Charles W. Musgrove, general manager, will construct one bridge over Wichita River and several smaller ones.

S. C., Anderson.—Anderson county, South Carolina, and Hart county, Georgia, will construct steel bridge over Savannah River near Brown's Ferry; cost about \$30,000. Address Anderson County Commissioners, Anderson, S. C.

S. C., Greenville.—Greenville & Knoxville Railway, J. S. Crews, general manager, awarded contract to Nichols Construction Co., Atlanta, Ga., to construct three bridges over middle Saluda River; one structure to be 300 feet long and 45 feet high, other two 200 feet long and 30 feet high; wood construction; concrete abutments.

S. C., Lexington.—Lexington county will construct steel bridge over Saluda River at Stillwater; single span; two piers reinforced with steel bars; length 656 feet; accepted plans by C. W. Curry, representing Austin Bros. of Atlanta, Ga. (Location changed from Amick's Ferry, previously stated.)

Tenn., Morristown.—City will construct concrete bridge on Main St. across Turkey Creek. Address The Mayor.

Tenn., Morristown.—E. W. Grant, Mayor, states building of bridge recently noted has been indefinitely postponed.

Tenn., Selmer.—McNairy county will construct two steel bridges, one over Cypress Creek at Selmer and other over Big Shake Creek about 12 miles east of Selmer; contract will soon be awarded. Address County Commissioners.

Tex., Cotulla.—La Salle county will construct steel highway bridge over Nueces River; 80-foot span; 16-foot roadway; reinforced concrete abutments; bids received until October 19; W. H. Sylvester, engineer, Cotulla; C. C. Thomas, County Judge. (See "Machinery Wanted.")

Tex., Fort Worth.—Hedrick & Cochrane, consulting engineers, Kansas City, Mo., made preliminary survey and prepared sketch of proposed bridge over Trinity River at Arlington Blvd.; reinforced concrete; roadway 54 feet wide; two sidewalks, about eight feet wide; two main piers to be carried to bedrock and others to rest on concrete piers; conduit spaces for water and gas mains, telephone and electric-light wires, etc.; estimated cost \$120,000.

Tex., Fort Worth.—City is considering extension of Allen Ave. viaduct across Houston & Texas Central Railway and Gulf, Colorado & Santa Fe Railway. J. D. Trammell, City Engineer.

Va., Jonesville.—Lee county will construct eight bridges; bids received until November 3; P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

Va., Surry.—Surry county will construct 54-foot steel truss over Blackwater River 3½ miles from Waverly, Va.; bids received until noon October 28; P. St. J. Wilson, State Highway Commissioner, Richmond, Va. (See "Machinery Wanted.")

W. Va., Grafton.—Grafton Traction Co. awarded contract to Farris Bridge Co., Pittsburgh, Pa., to construct bridge across Tygart's Valley; require 400 tons steel; cost \$30,000.

W. Va., Guyandotte.—Cabell County Commissioners awarded contract to Virginia Bridge & Iron Co., Roanoke, Va., to construct bridge at Russell's Creek; plans prepared by Leeten-Maupin Engineering Co. (Recently noted to cost about \$15,000.)

W. Va., Huntington.—Cabell County Commissioners will award contract to Virginia Bridge & Iron Co., Roanoke, Va., to construct bridge across Guyan River.

CANNING AND PACKING PLANTS

Miss., Morehead.—Karnes Sons Cement Tile Co., C. O. Karnes, president, will erect plant; cost \$5000. (See Miss., Yazoo City.)

Miss., Wiggins.—American Pickle & Can-

ning Co., P. H. Roberts, manager, will build and equip canning and pickling plant for sugar-cane syrup, vegetables, pickles, catsup, hominy, etc. (See "Machinery Wanted.")

Miss., Yazoo City.—Karnes & Sons Cement Tile Co., C. O. Karnes, president, will erect plants at Yazoo City and Morehead, Miss., recently noted; concrete blocks covered with corrugated iron; cost \$5000 each; company will erect; construction begun; machinery mainly purchased; daily capacity of each plant 3000 tiles. (See "Machinery Wanted.")

Mo., St. Louis.—West End Packing Co. will erect slaughter-house and factory and addition to cooler; cost about \$10,000; increased capital stock from \$30,000 to \$100,000.

Mo., St. Louis.—West End Packing Co. increased capital stock from \$30,000 to \$100,000.

CLAYWORKING PLANTS

Ga., Atlanta.—Brick and Tile.—Shaw Klin Co. incorporated with capital stock of \$500,000 by T. B. Felder and others to erect plant to construct brick and tile kilns. (See "Miscellaneous Factories.")

Okla., Oklahoma City.—Bricks.—Ruby Coal Mine & Brick Co. incorporated with \$100,000 capital stock by B. G. Patterson and others.

W. Va., Fairmont.—Bricks.—Swiger Brick Co. contemplates erecting one-story brick plant; structure to be 297x407 feet; cost \$30,000. Address care of John A. Swiger, Main and Jefferson Sts.

W. Va., New Cumberland.—Fire-brick.—Mack Manufacturing Co. (main offices Philadelphia, Pa.) will rebuild burned fire-brick plant.

COAL MINES AND COKE OVENS

Alabama.—Coosa Valley Company incorporated with \$2,000,000 capital stock by E. J. Spratling, W. W. Reid, R. H. Jones, Thomas Berry, B. B. Hamilton, Jr., all of Atlanta, Ga., and Harper Hamilton, Rome, Ga., to develop iron, coal, lime and cement lands in Northern Alabama. (See "Mining.")

Ky., Beech Creek.—Beech Creek Mining Co. incorporated with \$6000 capital stock by A. D. Kirkpatrick, R. R. Kirkpatrick and John Sadler, Jr.

Ky., Middlesboro.—Interstate Coal Co. purchased 800 acres of coal lands on Tye Fork, in Knox county; cost \$50,000; will open mines.

Okla., Dow.—Milby & Dow Coal & Mining Co., A. W. Breckenridge, manager, main office, Houston, Tex., awarded contract to Hugh Samples, Hartshorne, Okla., to erect structures recently noted; 200-foot wooden tipples, 30x30-foot engine-house and 30x40-foot boiler-house; ordinary and fireproof construction; plans by Brent E. Clark, Wow; will open proposals November 15 for three-track shaker screen; daily capacity of plant, 500 tons hard bituminous coal. (See "Machinery Wanted.")

Okla., Oklahoma City.—Ruby Coal Mine & Brick Co. incorporated with \$100,000 capital stock by R. C. Pratt, Atwood, Tenn.; W. J. Rechenbacher, Topeka, Kan.; B. G. Patterson, E. J. DuPree, J. T. Wiggins, Oklahoma City.

W. Va., Dorothy.—Four States Coal & Coke Co., David G. Jones, president, Union Trust Co., Pittsburgh, Pa., increased capital stock from \$5,000,000 to \$6,500,000; will open stock from \$5,000,000 to \$6,500,000.

CONCRETE AND CEMENT PLANTS

W. Va., Berkeley.—Security Cement & Lime Co., Equitable Bldg., Baltimore, Md., contemplates enlarging plant; cost \$30,000; increased daily capacity, 1000 tons of crushed stone and 1000 bushels of lime, making a total daily capacity of about 2000 tons of crushed stone and 5000 bushels of lime.

COTTON COMPRESSES AND GINS

Ala., Opelika.—G. G. Mitchell will rebuild cotton gin; 22x44 feet; iron roof and siding; construction by owner; machinery purchased; daily capacity 30 bales of cotton. (Recently reported burned.)

Ga., Macon.—Special dispatch to the Manufacturers Record says: "Carl White, president Southern Combing & Ginning Co., Chattanooga, Tenn., is considering location of \$200,000 branch plant, either in Macon, Savannah or Augusta."

Miss., Rome.—Planters' Gin Co. incorporated with \$10,000 capital stock by W. M. Simpson, J. J. Webb and others.

Okla., Marietta.—Farmers' Compress & Oil Mill Co. incorporated with \$15,000 capital

stock by John P. London, J. W. Scanlon, S. Westheimer and J. E. Robinson.

Tenn., Memphis.—Farmers' Gin & Cottonseed Oil Co. of Tennessee incorporated with \$10,000 capital stock by A. N. Kittrell, Emily Horton, Singer Wilkerson, Vandora Wells and D. Crews.

Tenn., Memphis.—Farmers' Gin & Cottonseed Oil Co. incorporated with \$10,000 capital stock by A. N. Kittrell, Emily Horton, Singer Wilkerson and others.

COTTONSEED-OIL MILLS

Ga., Grovania.—Grovania Cotton Oil Co., main office, Macon, Ga., incorporated with \$30,000 capital stock by W. S. Riley, W. H. Smith and others.

Tenn., Memphis.—Farmers' Gin & Cottonseed Oil Co. of Tennessee incorporated with \$10,000 capital stock by A. N. Kittrell and others. (See "Cotton Compresses and Gins.")

Tenn., Memphis.—Farmers' Gin & Cottonseed Oil Co. incorporated by A. N. Kittrell and others. (See "Cotton Compresses and Gins.")

DRAINAGE AND IRRIGATION

Ark., Almyra.—J. H. Wulff Drainage District will construct canals to drain about 30,000 acres; construction begun; J. R. Wulff and Ernest Malmers of Almyra and A. B. Potter of Stuttgart, Ark., are District Commissioners.

Ark., Cotton Plant.—Turkey Creek Drainage District has plans by W. A. Keene, Jr., of Cotton Plant for construction of drainage system in Woodruff and Monroe counties; will construct open canal 4½ miles long, 14 to 20 feet wide at bottom; depth three feet; require 40,000 cubic yards excavation; D. H. Echols, president of board.

Ark., Jonesboro.—J. W. Mayes and A. W. Hall are organizing drainage district to drain land along Big Creek.

Ark., Mississippi County.—Drainage District No. 9 is arranging to construct proposed drainage system; 200,000 acres; cost about \$1,200,000. Morgan Engineering Co., 610 Goodwyn Institute Bldg., Memphis, Tenn., is engineer.

La., New Orleans.—First Drainage District of Jefferson parish, Upper Plaquemines Drainage District and New Orleans Sewerage and Water Board propose drainage of 35,000 acres in Jefferson, Plaquemines and Orleans parishes; plan to construct three miles of levee to connect Harveys Canal and levee with Mississippi River levee, completing enclosure of entire area; also propose building pumping station at mouth of Harveys Canal to pump water from Bayou Barataria; no canal construction is to be undertaken, as number of waterways now extend through territory.

Mo., Caruthersville.—Pemiscot county will construct drainage canals; about 3,000,000 cubic yards earth excavation; bids received until November 20; Ben M. Tinsley, Clerk; B. O. Bennett, engineer. (See "Machinery Wanted.")

N. C., Statesville.—James P. Karr, president American Steel Dredge Co., Fort Wayne, Ind., states his company was not awarded contract to drain Fourth Creek; this company manufactures ditching dredges, but does not take construction contracts. (Recent report incorrect.)

Okla., Hobart.—Andy Anderson will install irrigation plant; purchased pump and engine, and will pump water from creek.

S. C., Georgetown.—Georgetown Farm Land & Homeseekers Co. will drain 20,000 acres from Black to Sampit rivers; propose to construct road and divide land into 25-acre farms. (Previously mentioned.)

Tenn., Dresden.—Morgan Engineering Co., Memphis, Tenn., has contract to construct proposed drainage system; 15,000 acres; 30 miles of canals; also levee construction.

Tex., Anahuac.—J. E. Broussard, F. M. Hamilton and L. W. Schwarz comprise board of directors and can give information relative to proposed drainage. (Chambers county recently noted to vote October 21 on organization of Trinity River Irrigation District, to drain 75,000 acres.)

Tex., Bay City.—J. M. Moore and A. J. Harty of Bay City; W. M. Furber, Markham, Tex., and others purchased properties of the Moore-Cortes Canal Co.; will install steam dredge and cut channel through "Mud Flat" to main channel of Colorado River, irrigating 20,000 acres.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tex., Beaumont.—Hemingway Irrigation Co. (C. B. Hemingway, Beaumont, and associates) contemplates organization of company with capital stock of \$20,000 to acquire and irrigate 40,000 acres in Western Texas.

Tex., Brownsville.—Cameron County Drainage District No. 1 awarded contract to N. E. Rendall of Brownsville at \$161,542.64 for four main drainage canals, including about 1,000,000 cubic yards of excavation, bridges, flumes, etc.

Tex., Fort Stockton.—Zimmerman Land & Irrigation Co. incorporated with \$200,000 capital stock by Davie Zimmerman, James W. Fogelman and Silas E. Rice; will construct irrigation system in Pecos county.

Tex., Rio Medina.—Medina Irrigation Co., 520 E. Houston St., San Antonio, Tex., has postponed opening of bids for construction of west canal previously described and subsidiary structures from October 20 until October 30. (See "Machinery Wanted.")

ELECTRIC PLANTS

Ala., Decatur.—City contemplates erection of electric-light plant; probable cost, \$50,000. Address The Mayor.

Fla., Auburndale.—City will construct electric-light and power plant. Address The Mayor.

Ky., Cadiz.—City will sell electric-light franchise October 23; water-power; A. C. Burnett, secretary Commercial Club. (See "Machinery Wanted.")

Ky., Orangeburg.—City is considering construction of electric-light plant. Address The Mayor.

Ky., Lexington.—Kentucky State University contemplates building central light and power plant and heating system to supply all buildings. H. S. Barker is president.

Ky., Prestonsburg.—Prestonsburg Electric Light Co. contemplates, it is reported, enlarging electric-light plant. (Recently noted to have increased capital stock from \$6000 to \$10,000.)

Ky., Whitesburg.—Jasper Bowens is promoting construction of electric-light plant.

La., Monroe.—City voted to extend electric light system. Address The Mayor.

N. C., Marshall.—Madison Light & Power Co. (recently reported incorporated with \$10,000 capital stock) has factory sites for sale and furnishes power to operate them; J. H. White, president; F. Shelton, secretary and treasurer. (See "Machinery Wanted.")

N. C., Morganton.—City granted franchise to H. L. Milner to construct electric-light system.

Okla., Howe.—City will vote November 4 on granting franchise to Howe Electric Light & Power Co. for construction of electric-light plant. Address The Mayor.

Okla., Fairland.—Fairland Light & Power Co., L. D. Long, proprietor, Lock Box 162, will expend \$3200 to construct electric-light plant to generate 25 horse-power; erect 24x16-foot brick building; F. Roberts, engineer in charge. (Recently noted.)

Okla., Ochelata.—Ochelata Light & Water Co. incorporated with \$6000 capital stock by J. F. Hughes, Arthur Davider and Oscar J. Olson, all of Oklahoma City, Okla.

Okla., Sulphur.—Rapid Transit Interurban Co., Tecumseh, Okla., will install plant to supply current for various cities along route of proposed railway from Tecumseh to Sulphur, Okla.

Tex., Alvin.—Alvin Water, Light & Ice Co. and Alvin Ice, Light & Power Co. consolidated as Alvin Electrical Co.; will be incorporated with \$40,000 capital stock by J. A. Cook, M. S. French, P. H. Monaker and others.

Tex., Carlsbad.—Anti-Tuberculosis Commission, Ralph Steiner, chairman, Austin, Tex., accepted plans by Henry T. Phelps, San Antonio, Tex., for tuberculosis sanitarium; buildings will include light and power plant; reported bids for construction will soon be invited.

Tex., Guffey.—Beaumont Ice, Light & Refrigerating Co.'s plans for extending power to Spindle Top oil fields for light and power include three miles of pole line; will take care of 300 kilowatts of motors, transmission voltage 6600; current, three-phase 60-cycle; construction begun. (Recently noted.)

Tex., Harlingen.—City voted \$32,000 bond issue for light, water and street improvements. Address The Mayor. (Previously mentioned.)

Tex., Houston.—Condit & Henderson will, it is reported, extend electric-light system in Bellaire, Westmoreland Farms.

Tex., Yoakum.—Creamery Dairy Co. will install 12-ton ice plant and electric-light system; main office, San Antonio, Tex.

Tex., Waco.—John C. Davis, City Secretary, advises that steps have been taken toward cancelling \$250,000 bond issue voted, and electric-light plant will not be constructed.

FERTILIZER FACTORIES

Md., Frederick.—Frederick City Abattoir Co., Frank C. Norwood, president, purchased machinery for fertilizer plant; will erect fire-proof addition; construction by company. (Recently noted.)

S. C., Charleston.—Coe-Mortimer Company will erect fertilizer plant; purchased 25 acres on Cooper River; provide dock facilities; company's architects are preparing plans; no details at present; M. H. Grace, 51 Chambers St., New York, is president.

S. C., Trenton.—Trenton Fertilizer Co. incorporated with \$7000 capital stock; J. B. Knight, president; J. D. Mathis, secretary-treasurer; T. W. Miller, manager.

Tex., Dallas.—Rasmussen Bros. received permit to erect fertilizer reduction plant; cost \$10,000. (Previously mentioned.)

FOUNDRY AND MACHINE PLANTS

Ala., Attalla.—Iron Works.—Peacock Iron Works, Selma, Ala., is considering, it is reported, establishment of plant in Attalla.

Ga., Atlanta.—Blower Systems, Fans, etc.—South Atlantic Blow Pipe & Sheet Metal Co. organized with \$50,000 capital stock by T. H. McMillan of Savannah, Ga.; absorbs Standard Blower & Metal Manufacturing Co.

Ga., Savannah.—Southern Fittings & Foundry Co. recorded mortgage for \$100,000 to secure bonds for purchase of site and construction of plant.

Ky., Louisville.—Bolts and Iron.—Louisville Steel & Iron Co. is being organized with \$400,000 capital stock to acquire property of Louisville Bolt & Iron Co.; will make improvements.

Ky., Maysville.—Heating Plants.—George Longnecker, W. W. Ball and others are interested in organization of company to manufacture steam and hot-water heating plants; will probably acquire old plant of Maysville Foundry & Engineering Co., install new equipment and remodel.

Ky., Newport.—Gasoline Engines, etc.—Dean Manufacturing Co. will enlarge plant; proposes to manufacture aeroplane motors in addition to gasoline engines and motor-bus.

Mo., St. Louis.—Conveying Machinery.—Alvey Bros. Machinery Co. purchased machinery at cost of \$4000 for iron and steel work; building erected; J. A. Alvey, president; P. C. Alvey, vice-president; W. F. Alvey, secretary; H. H. Alvey, treasurer. (Recently noted incorporated with \$12,000 capital stock.)

Mo., St. Louis.—Castings.—Liberty Foundry Co., William T. Mellow, manager, 7601 Reilly Ave., awarded contract to John Dougherty, 7900 Reilly Ave., St. Louis, to erect foundry building; 65x101 feet; daily capacity six tons of light gray-iron castings. (Recently noted.)

Mo., St. Louis.—Busch-Sulzer Bros.—Diesel Engine Co., Adolphus Busch, president, advises Manufacturers Record that plans for recently-noted plant are not yet perfected, although site is practically selected. (This company previously noted incorporated with \$2,100,000 capital stock to build engines under Diesel patents; August A. Busch, first vice-president; J. R. Harris, second vice-president and general manager; A. C. F. Meyer, third vice-president and treasurer; Max Roter, chief engineer.)

N. C., King.—Sawmills, etc.—V. T. Grabs Company, V. T. Grabs, president, will erect building, two stories, 54x76 feet, to be equipped for manufacturing portable sawmills, woodworking machinery, etc.; construction by company. (Recently reported incorporated with \$50,000 capital stock.)

Tenn., Chattanooga.—Sawmill Machinery.—Wheland Machine Works and Chattanooga Machinery Co. consolidated as Wheland Company with \$1,000,000 capital stock; will remodel plants, install new equipment and make feature of special woodworking machinery; two plants cover total of 23 acres.

Tenn., Harriman.—Harriman Manufacturing Co. will repair foundry recently reported burned at loss of about \$7000; will purchase foundry equipment.

Va., Richmond.—Drilling Machine.—Richmond Stay-Bolt Drilling Machine Manufacturing Co. incorporated with \$25,000 capital stock; L. L. Scherer, president; James D. Patton, vice-president; Samuel Cohe, secretary-treasurer.

GAS AND OIL DEVELOPMENTS

Ky., Blaine.—Hood Oil & Gas Co. (recently noted incorporated with \$6000 capital stock by H. H. Gambrill and others) will open bids for machinery after November 15.

La., Alexandria.—Adolphe Rosedale states Winn Parish Oil Co. will be organized. (Recently noted securing options on about 20,000 acres land.)

La., Ruston.—Hill City Oil Co. incorporated with \$100,000 capital stock to develop oil property.

La., Vivian.—William A. Oncken and associates, New Orleans, La., purchased, it is reported, for development 30 acres of oil lands about one and a half miles from Vivian.

Okla., Checotah.—Company has organized with T. M. Price president, A. L. Walters vice-president, R. R. Randall secretary, R. B. Robinson treasurer; will drill for oil and gas.

Okla., Dewey.—Koester Oil & Gas Co. incorporated with \$29,000 capital stock by F. J. Moser, Kane, Pa.; H. E. Koester, Dewey; L. A. Rowland, Bartlesville, Okla.

Okla., Grandfield.—Deep Red Oil Co. incorporated with \$250,000 capital stock by W. Hayne Robertson and George Schiek of Grandfield, R. H. Dearing and C. H. Dearing, Dallas, Tex., and William Stephenson, Batson, Tex.

Okla., Hobart.—Kiowa Oil & Gas Co. incorporated with \$10,000 capital stock by A. B. Wey, D. M. Breneman and J. M. Bonham.

Okla., Oklahoma City.—Orion Oil & Gas Co., 604 Majestic Bldg. (recently noted incorporated with \$20,000 capital stock by Chas. B. Daniels, Chas. S. Blackburn and Chas. H. Garnett), will open drilling bids March 1. (See "Machinery Wanted.")

Okla., Ramona.—Ramona Land & Oil Co. incorporated with \$15,000 capital stock by George H. Fry, George H. Anderson and H. S. Caldwell, all of Oklahoma City, Okla.

Okla., Perry.—City Council granted franchise to F. W. Marland, Ponca, Okla., to lay pipe line into Perry to furnish city with gas from Ponca field.

Okla., Ponca.—City will vote November 16 on granting 21-year franchise to E. W. Marland to furnish city with natural gas.

Tex., Electra.—Texas Company, Houston, Tex., will construct pipe line from Electra to Dallas, connecting with main line from Tulsa to Port Arthur.

ICE AND COLD-STORAGE PLANTS

Ala., Hartford.—Mantz Ice Manufacturing and Bottling Works, J. H. Mantz, president, will open bids November 1 to erect ice plant; 120x80 feet; plans by W. S. Price and P. N. Talbert; machinery purchased; daily capacity, 10 tons. (Recently noted.)

Ga., Atlanta.—Piedmont Ice & Coal Co. incorporated with \$100,000 capital stock by J. H. Howe, E. L. Howe and J. D. Howe. (Howe Ice Co. of Nashville, Tenn., recently reported to establish ice plant in Atlanta.)

Ga., Milledgeville.—Company organized with \$30,000 capital stock by T. L. McComb, Julius A. Horne, W. L. Ritchie and others; will establish 50-ton ice plant and laundry.

Ky., Louisa.—R. L. Vinson, John G. Burns, M. B. Sparks and T. W. Ball are promoting erection of ice plant.

N. C., Albemarle.—P. J. Honeycutt & Co. will construct ice plant; cost \$10,000 to \$15,000.

Okla., Atoka.—Atoka Ice & Power Co. will increase capacity of plant.

Tenn., Paris.—Paris Coal & Ice Co. purchased new location and will increase capacity of ice plant; awarded contract for drilling deep well; machinery purchased.

Tex., Bartlett.—A. S. Hardin will erect ice plant.

Tex., Bartlett.—Bartlett Light & Power Plant, Earnest Hardin, president, will install ice plant.

Tex., McKinney.—McKinney Ice, Light & Coal Co. will install 20-ton ice plant; contract awarded.

Tex., Smithville.—Smithville Ice Factory, John L. Hill, president, purchased ice plant recently noted; has 40x60-foot corrugated building; daily capacity, 25 tons of ice; will install coils insulation. (See "Machinery Wanted.")

Tex., Yoakum.—Creamery Dairy Co. will install 12-ton ice plant and electric-light system; main office, San Antonio, Tex.

Va., Buckroe Beach.—Fishermen's Co-operative Association contemplates erecting 10-ton ice plant.

LAND DEVELOPMENTS

Ala., Bay Minette.—Nassau Plantation Co. incorporated with \$12,000 capital stock to cultivate tobacco; C. H. Holsome, president; F. E. Butler, vice-president; L. F. Frolich, secretary-treasurer, all of New York.

Ala., Birmingham.—Birmingham Farm Garden Co. purchased 20,000 acres 35 miles from

Birmingham and will develop for truck farming; purchase price, \$250,000. Ben I. White, Henderson, Ky., is president. (Company recently reported incorporated.)

Ala., Maun Station (not a postoffice).—Thomas P. Littlepage, Union Trust Bldg., Washington, D. C., purchased land at Maun Station in Mobile county and will develop for farming; will erect dwellings, outhouses and fencing.

Ala., Tuscaloosa.—Kaul Lumber Co., John L. Kaul, president and treasurer, Birmingham, Ala., will develop town in connection with saw and planing mill plant, etc. (See "Lumber Manufacturing.")

D. C., Washington.—Chevy Chase to Great Falls Land Corporation incorporated with \$1,500,000 capital stock to develop lands from Chevy Chase to Great Falls; Robert E. L. Yellott, 1410 II St. N. W., president; J. W. Long, vice-president; Arthur R. Thompson, secretary-treasurer.

Fla., Tallahassee.—J. T. Perferator is interested in organization of company to plant 1000 or more acres in peanuts. (See "Machinery Wanted.")

Florida.—Avocado Land Co., 703 Kansas City Life Bldg., Kansas City, Mo., will develop 3000 acres eight miles from Miami on bay front; plat and sell in small tracts; Theo. Ackerman, president; H. F. Masters, vice-president; E. A. Kelly, treasurer; J. E. Milligan, secretary.

Ga., Waycross.—Georgia Farm, Fruit & Pecan Co. organized with \$1,000,000 capital stock; will develop property for pecan growing and farm products; G. W. Deen, president; has 20,000 acres of land; will open bids January 1 for machinery, etc. (See "Machinery Wanted.")

La., Lake Charles.—Hi-Mount Land Co., F. M. Fuller, manager, purchased 35 acres fronting on lake.

Md., Baltimore.—Montebello Park Co. incorporated with \$25,000 capital stock by Ephraim Macht, Macht Bldg., 11-13 E. Fayette St.; Ellis C. Hightman and John Welsh.

Md., Baltimore.—Round-Bay-on-the-Severn Co. (John B. Goodwin, 2208 Reisterstown Rd.) will make improvements at Round-Bay-on-the-Severn, including roads and sidewalks and grading and betterment of beach front.

Md., Pearre, P. O. Little Orleans.—Potomac Valley Orchard Co., C. L. DeVore, manager (recently noted incorporated with \$50,000 capital stock) will develop 1000 acres of land for orchard and poultry purposes in Washington and Allegany counties; entire capital to be expended in improvements in five years. (See "Machinery Wanted.")

Miss., Greenwood.—Buck Lake Plantation Co. incorporated with \$15,000 capital stock by A. N. Thompson, J. W. McClure, F. P. Gearhart and others.

Miss., Jackson.—Central Land Co. incorporated with \$10,000 capital stock by George W. May, J. O. S. Sanders, W. J. Davis, W. J. McGee, John Mosal, J. F. McKay and others.

N. C., Charlotte.—Charles Brenizer, M. A. Bland, T. H. Ruffin, J. R. Van Ness and others purchased 75.08 acres in suburbs of Charlotte and will improve as residential section.

N. C., Raleigh.—Raleigh Development Co. incorporated with \$125,000 capital stock by H. E. Litchford, J. R. Rogers, R. W. Winston and Raleigh Real Estate & Trust Co.

Okla., Oklahoma City.—Jefferson Ridge Development Co. incorporated with \$10,000 capital stock by Capp Jefferson, W. H. Jernagin, B. J. F. Westbrook, Chester A. McCreary and Gilbert C. Peran.

S. C., Anderson.—Frank & De Camps Realty Co. has organized with John Frank, president; C. J. De Camps, secretary-treasurer; will do general real-estate business, etc. (Recently noted incorporated with \$10,000 capital stock.)

Tex., El Paso.—Southwestern Ostrich Farm, T. W. Kemp, manager, will develop 20 acres of land about five miles from El Paso for ostrich farming; has 20 birds; will conduct exhibition farm, and later contemplates establishment of factory for plumes.

Tex., Cleburne.—Belle Meade Land Co. incorporated with \$18,000 capital stock by J. E. Nall, S. B. Caps and W. M. Odell.

Tex., Houston.—Lancaster Mills, Boston, Mass., purchased about 360 lots in Bellaire at Westmoreland Farms and will improve; W. H. Goodwin is representative.

Tex., Menard.—Menard Land Co. incorporated with \$4000 capital stock by F. B. Parker, J. W. Naring, R. J. Hole.

Va., Woodstock.—Narrow Passage Orchard incorporated with \$10,000 capital stock; John L. Wissler, Sr., president; John L. Wissler, Jr., secretary, both of Mt. Jackson, Va.; F. D. Newman, treasurer, Woodstock.

Va., Ocean View.—Ocean View Development Co., I. T. Jones, secretary-treasurer, purchased 60 additional acres adjoining Grand View site, and will develop as resort.

Va., Orange.—Orange Improvement Co. incorporated with \$15,000 capital stock; George T. Marshall, president; J. Newton Marshall, secretary; V. R. Shackelford, treasurer.

W. Va., Martinsburg.—Cherry Hill Orchard Co. increased capital stock from \$50,000 to \$75,000.

LUMBER MANUFACTURING

Ala., Decatur.—Decatur Lumber & Manufacturing Co. incorporated with \$15,000 capital stock; purchased mill and machinery from Bixby Lumber Co. and will make improvements; plant to be in operation November 1; D. A. Bixby, president and secretary; E. M. Knight, vice-president; William F. Bixby, treasurer and manager.

Ala., Montgomery.—Pine Plume Lumber Co. increased capital stock from \$10,000 to \$50,000.

Ark., Helene.—Penrod Walnut & Veneer Co., Kansas City, Mo., will establish plant.

Ark., Marmaduke.—North Arkansas Lumber Co., R. W. Barrick, president, St. Louis, Mo., purchased Brown Lumber Co.'s properties for \$20,000; latter company has offices at Marmaduke, Rector and Walnut Ridge, Ark., and at Hornersville, Mo.

Ala., Tuscaloosa.—Kaul Lumber Co., John L. Kaul, president and treasurer, Birmingham, Ala., will locate proposed plant on 25-acre tract near Tuscaloosa; to consist of planing mill, sawmill, drykiln and creosoting plants, machine shops, by-products plant and about 25 miles standard-gauge railroad; buildings of concrete and steel fireproof construction; company owns long-leaf yellow pine timber in Bibb, Perry, Hale and Tuscaloosa counties; plans include town development, with dwellings, etc., for employees; Geo. H. Miller, Boston, Mass., engineer in charge of town development; P. W. Turner of Birmingham reported to have received contracts for construction of spur track and for grading of mill site. (Previously noted.)

Fla., Flvay.—M. V. Grees of Hart Lumber Co., to be located at Tampa, Fla., will install several small sawmills and cut by contract about 250,000,000 feet of timber; no equipment to purchase. (This timber recently noted purchased by Grees Manufacturing Co., Jacksonville, Fla.)

La., Clayton.—Case Lumber Co. incorporated with \$50,000 capital stock by A. E. Cace, W. J. Ward and others; will improve mill property and purchase additional timber land.

Miss., Enterprise.—James G. Miller, St. Louis, Mo., and J. K. Carlyle, Chicago, Ill., are considering purchase of 10,000 acres of timber land and establishment of saw and planing mills and box factory.

Mo., St. Louis.—Morriss Lumber Co. will deal in lumber and forest products. (Recently noted incorporated with \$5000 capital stock.)

N. C., Andrews.—Andrews Lumber Co., recently noted incorporated with \$300,000 capital stock, will open bids January 1 to erect lumber plant; ordinary construction; plans not determined; machinery bids opened December 1; E. M. Campbell, president; H. R. Campbell, secretary and manager; John Gibson, treasurer. (See "Machinery Wanted.")

N. C., Black Mountain.—A special dispatch to Manufacturers Record says: "Campbell & Dickey of United States Spruce Co., Marion, Va., purchased at \$57,000 spruce timber on 8900-acre tract; will build 100,000-foot daily capacity mill and 40-cord daily capacity pulp plant near Black Mountain; also 16-mile narrow-gauge railway; mill and railway to cost \$200,000."

N. C., Newbern.—Hanks Lumber Co. incorporated with \$25,000 capital stock by W. H. Hanks, H. F. Hanks and D. W. Hanks.

Tenn., Bristol.—Andrew Smalling purchased timber land on Holston Mountain, and will develop.

Tenn., Chattanooga.—Central Lumber Co., Fulton and Hill Sts. (recently reported incorporated with \$50,000 capital stock), succeeds Central Manufacturing Co.; W. D. Hughes, president of new company; Sam R. Gayther, manager; manufactures poplar, oak and chestnut lumber, crossarms, etc.; also deals in machinery and mill supplies; daily capacity, about 35,000 feet lumber. (See "Machinery Wanted.")

Tenn., Memphis.—Sargent Lumber Co. incorporated with \$5000 capital stock by T. J. Douglass, William Sargent, Charles W. Anderson and others.

Tenn., Memphis.—Sargent Lumber Co. incorporated with \$5000 capital stock by T. J. Douglass, W. H. Sargent, Chas. W. An-

derson, J. M. McKernon and W. R. Johnson.

Tex., Dallas.—Western Lumber & Creosoting Co., 905 Praetorian Bldg., organized with J. J. Marshall, president and manager; R. W. Yarborough, vice-president; L. M. Washburn, secretary; will erect fireproof creosoting plant; day labor. Mr. Yarborough is engineer in charge; equipment will include tanks, boilers, pumps, retorts, tram cars and block cages; daily capacity 5000 cubic feet. (Recently noted incorporated with \$50,000 capital stock.)

METAL-WORKING PLANTS

Tex., Houston.—Palmetal Co. incorporated with \$60,000 capital stock by R. H. Brooks, W. W. Woodworth, Gordon Hill and others.

MINING

Alabama.—Iron, Coal, etc.—A dispatch to Manufacturers Record says: "Coosa Valley Company incorporated; capitalization, \$2,000,000; E. J. Spratling, W. W. Reld, R. H. Jones, Thomas Berry, B. B. Hamilton, Jr., Atlanta, Ga.; Harper Hamilton, Rome, Ga.; proposes development 2300 acres iron, coal, lime and cement lands in Coosa Valley, Northern Alabama."

Ark., Harrison.—Zinc.—J. T. Smith, Eureka Springs, Ark., and D. M. Wolfe of New York are considering purchase and development of zinc mine; purchase price to be about \$50,000.

Ga., Atlanta.—A dispatch to Manufacturers Record says: "Lutz Development Co. incorporated with \$100,000 capital stock by George H. Lutz of Cherokee county and others; offices in Atlanta."

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Ga., Alcorn (not a postoffice).—Southern Gravel Co. (E. C. Hodford and W. W. Simmons), Eastman, Ga., will develop gravel beds at Alcorn; will soon begin shipping washed and screened rough, reinforced and roof gravel.

Ga., Cherokee County.—Marble.—A special dispatch to Manufacturers Record says: "New South Marble Quarrying Co., Atlanta, Ga., incorporated; capitalization \$100,000; F. Marion Thomason and others; will develop Cherokee county property; plans are being prepared for 20-gang mill; day labor; crusher machinery purchased; invites bids on general equipment." (See "Machinery Wanted.")

Ga., Rome.—Sand.—Nickajack Sand Co. incorporated with \$10,000 capital stock by R. M. Hoyt and J. L. Johnson, Jr.

Mo., Joplin.—L. A. Cunningham will, it is reported, rebuild concentrating mill at Red Lion Mine to replace burned plant.

Mo., Sarcosie.—Zinc.—Lucky Ben Mining Co. (J. R. Harry and W. H. Harmon, Carterville, Mo., and others) contemplates development of zinc mines and erection of concentrating mill.

Okla., Oklahoma City.—Stone.—Oklahoma Stone Co. incorporated with \$50,000 capital stock by H. W. Pentecost, Lee Patterson and Jacques Dur.

Tenn., Knoxville.—Marble.—Asbury Marble Co. incorporated with \$25,000 capital stock by J. B. Jones, J. M. Burkhardt and others to quarry marble; machinery practically supplied. (Recently noted under "Miscellaneous Factories.")

Tex., Galveston.—Gravel.—Galveston Gravel Co. incorporated with \$5000 capital stock by Sam Fridner, A. A. Goodwin and Dave S. Fridner; will secure gravel from Bolivar Peninsula.

MISCELLANEOUS CONSTRUCTION

Fla., Pensacola.—Wharf.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will, it is reported, construct wharf and warehouse 1800 feet long and 100 feet wide at foot of Jefferson St.; reported cost, \$100,000.

Fla., St. Augustine.—Dock.—Lewis H. Barrett, Pleasantville, N. J., will construct dock at foot of Hypollita St.; John H. Poman will supervise construction.

Ky., Louisville.—Heating.—Kentucky Electric Co. contemplates building steam-heating plant; applied for franchise.

La., Atherton.—Levee.—Roach & Stansell, Memphis, Tenn., have contract to construct 600,000 cubic yards of Atherton levee, in Upper Texas District, Louisiana.

La., New Orleans.—Levee.—Board of State Engineers awarded following contracts for levee construction: R. J. Johnson, Ben Ruth levee, right bank Red River, Avoyelles parish, 65,000 cubic yards; Schayot & Meyers, Linwood levee, Plaquemine parish, left bank Mississippi River, 55,000 cubic yards; Wilmer Henritz, Nestor, La., Doullut's Canal levee, Plaquemine parish, right bank Mississippi River, capping and revetment, 2900 cubic yards of levee and 1850 linear feet of revetment; Joseph Savole, Fairview levee, Lake Borgne Basin levee district, new work, 25,000 cubic yards. (Call for bids lately noted.)

awarded contract to Hennibique Construction Co., 1170 Broadway, New York, at approximately \$105,000 for construction of about 500 feet reinforced concrete sea wall; use reinforced concrete sheet piles 55 feet long. (Recently mentioned.)

Va., Norfolk.—Dredging.—Government awarded contract to Atlantic, Gulf & Pacific Company, Park Row Bldg., New York, for dredging about 675,000 cubic yards in south branch of Elizabeth River. (This company recently mentioned as lowest bidder.)

MISCELLANEOUS ENTERPRISES

Ala., Birmingham.—Bottles.—Birmingham Bottle Supply Co. incorporated with \$10,000 capital stock; H. I. Goldstein, president; Leonard I. Frank, vice-president; D. Vorenberg, secretary-treasurer.

Ala., Mobile.—Publishing.—United States Publishing Co. incorporated with \$2500 capital stock by Sidney Berrey and R. K. Warren of Mobile, and J. S. Nodelbach, Grand Bay, Ala.

Ala., Mobile.—Incinerator.—City has not prepared definite plans for garbage crematory, etc., recently noted; J. J. McMahon, secretary Board of Commissioners. (See "Machinery Wanted.")

Ga., Abbeville.—Mineral Water.—Abbeville Mineral Springs Co. incorporated with \$150,000 capital stock by W. B. DuVall, Hal Lawson and C. O. DuVall; main office, Atlanta, Ga.

Ga., Augusta.—Transportation.—Howard H. Stafford, president Georgia-Carolina Brick Co., Irish-American Bldg., is interested in organization of company to operate high-power towboats and barges on Savannah River; city will provide terminal facilities. (See "Warehouses.")

Ga., Milledgeville.—Laundry.—Company organized with \$30,000 capital stock by T. L. McComb and others; will establish laundry. (See Ice and Cold-storage Plants.)

Ky., Greenville.—Muhlenberg Sentinel Publishing Co. will rebuild printing plant recently reported burned.

Ky., Maysville.—Tobacco Rehandling.—Planters' Warehouse Co. will install hydraulic presses and other machinery in tobacco-rehandling plant.

Mo., Huntsville.—Publishing.—Hamilton Publishing Co. incorporated with \$10,000 capital stock by John N. Hamilton, S. C. Hamilton, Margaret S. Mabey and others.

Md., Baltimore.—Construction.—West Construction Co. incorporated with \$100,000 capital stock by Herbert J. West (president Baltimore Ferro-Concrete Co.), 16 St. Paul St.; Maurice F. Malder and John C. Siegle.

Miss., Newton.—Printing.—Newton Printing Co. incorporated with \$15,000 capital stock by T. E. Waldrop, R. L. Breland, W. P. Chapman and others.

Miss., Walthall.—Newspaper.—Walthall Enterprise organized by Amer and Avery Hood.

Mo., St. Louis.—Barge Line.—St. Louis Steel Barge Co. organized with \$400,000 capital stock by W. K. Bixby, D. R. Francis, W. K. Kavanaugh, A. E. Faust, A. H. Fredricks and others; proposes acquiring Mississippi Valley Transportation Co., operating steel barge line on Mississippi River.

Mo., St. Louis.—Abattoir.—West End Packing Co. will erect two-story factory and slaughter-house and addition to cooler; cost about \$10,000.

Mo., University, Station St. Louis.—Publishing.—University City Publishing Co. incorporated with \$5000 capital stock by Sidney Morse, Frank O'Keefe and George C. Mackay.

Mo., St. Louis.—Ore Refinery, etc.—United States Assay and Refining Co. incorporated with \$7000 capital stock by George W. Marks, Robert Hofferkamp and George B. Webster for assaying and refining ores, mineral products, etc.

N. C., Hickory.—Feed.—Boyd Feed Co. incorporated with \$25,000 capital stock by C. M. Boyd and others.

Okla., Muskogee.—Construction.—Southern Construction Co. incorporated with \$15,000 capital stock by Frank G. Manson and Arthur F. Krummel of Muskogee and H. S. Atwood, Parsons, Kans.

Okla., Tulsa.—Oil Refinery.—J. M. Cosden purchased Tulsa Refining Co.'s oil refinery with capacity of 500 barrels daily.

S. C., Beaufort.—Printing.—Beaufort Printing & Publishing Co. incorporated with \$2500 capital stock by Charles Bellinger, J. S. Claghorne, Gus Sanders, Thomas Talbird and others.

Tenn., Memphis.—Building.—Jefferson Building Co. increased capital stock \$30,000.

Tenn., Memphis.—Hardware.—White Hard-

ware Co. incorporated with \$10,000 capital stock by H. A. White, W. C. Penn, F. M. White, Jr., and others.

Tenn., Nashville.—Publishing.—Columbian Wyandotte Publishing Co. incorporated with \$5000 capital stock by T. Reid Parrish, J. B. Groomer, J. B. Gleaves and others.

Tenn., Nashville.—Printing.—Wyandotte Publishing Co. incorporated with \$5000 capital stock by T. Reid Parrish, J. B. Groomer, J. B. Gleaves and others.

Tex., Dallas.—Elevator.—Linz Bros. will repair and remodel elevator; cost \$3000.

Tex., Dallas.—Creosoting Plant.—Western Lumber & Creosoting Co., 905 Praetorian Bldg., will erect fireproof creosoting plant with daily capacity of 5000 feet. (See "Lumber Manufacturing.")

Tex., Gainesville.—Dairy.—Field Bros., 101 E. California St., will remove equipment from dairy previously operated to new site recently noted purchased; enlargement.

Tex., Mathis.—Cattle.—Live Oak County Cattle Co. incorporated with \$10,000 capital stock by Julius Dreier, R. A. Atkinson and George J. Schleicher.

Tex., Fort Worth.—Dyeing.—Fishburn Dye House incorporated with \$21,000 capital stock by W. B. Fishburn, C. H. Collamer and W. B. Paddock.

Tex., San Antonio.—Garbage Incinerator.—City proposes construction of garbage incinerator; cost about \$25,000. Address The Mayor.

Va., Norfolk.—Creosoting.—Atlantic Creosoting & Wood Preserving Co. opened bids to repair burned creosoting plant; Gregory & Williamson of Norfolk are lowest bidders. (Recently mentioned.)

Va., Norfolk.—Creosoting.—Atlantic Creosoting & Wood Preserving Co. has plans by B. F. Mitchell of Norfolk for repairs to burned creosoting plant; building to be of brick, 68x123 feet; bids have been invited and contract will soon be awarded. (Recently mentioned.)

W. Va., Huntington.—Construction.—Ohio Valley Construction Co. incorporated with \$10,000 capital stock by F. H. Medley and S. H. Bowman of Huntington, W. E. Minter and C. L. Rice of Kenova, W. Va., and E. O. Young of Ashland, Ky.

W. Va., Morgantown.—Garbage Incinerator. City proposes construction of garbage incinerator. Address The Mayor.

W. Va., Parkersburg.—Poultry.—Grandview Poultry & Farm Products Co. incorporated with \$5000 capital stock by Myer Newberger, George Newberger and George Wright.

MISCELLANEOUS FACTORIES

Ala., Birmingham.—Airbrake Release.—United States Airbrake Release Co., Walter Moore, president, has no plans for building or equipping plant at present or in near future. (Recently noted incorporated with \$6000 capital stock.)

Ala., Montgomery.—Gas.—Richard Tillis is considering organization of company to construct gas plant; underground mains.

Ark., Argenta.—Gloves.—Clyde Pemberton, Fort Smith, Ark., will establish cotton-glove factory.

Ark., Fort Smith.—Distillery.—Fort Smith Dist. Co., John L. Casper, owner, will not erect distillery. (Recent report incorrect.)

D. C., Washington.—Automatic Calendar Clock Co. incorporated with \$1,000,000 authorized capital stock by John F. Robb, 1405 Decatur St. N. W., Washington; John D. Rhodes and A. P. Stevenson.

Fla., Tampa.—Cigars.—Ernst O. Engstrom, Pittsfield, Mass., vice-president of Tampa-Cuba Cigar Co., states building proposals will be opened in about 60 days. (Company recently noted incorporated to manufacture cigars; daily capacity, 15,000; capital stock, \$250,000; leased building; H. B. Guilford, president, Rochester, N. Y.)

Ga., Atlanta.—Kilns.—A special dispatch to Manufacturers Record says: "Shaw Kiln Co. incorporated by T. B. Felder and others; capitalization \$500,000; possibly erect plant to construct brick and tile kilns."

Ga., Atlanta.—Beverage.—Ulaca Beverage Co. incorporated with \$25,000 capital stock by R. B. Braswell, H. A. Pitner and others.

Ga., Kinderhook.—Young, Burton & Co. will, it is reported, rebuild turpentine distillery burned at loss of \$1500 to \$2000.

Ga., Macon.—Locomotive Safety Device.—Dickert Throttle & Lever Co. incorporated with \$35,000 capital stock by C. L. Dickert, C. W. Rice and W. A. Chapman to manufacture locomotive safety device.

Ky., Hickman.—Tobacco.—Kentucky Farmers' Tobacco Co. incorporated with \$250,000 capital stock by C. P. Shumate, F. S. Moore, A. M. Tyler and others.

La., Ruston.—Peanuts.—Gill Peanut Factory, N. B. Gill, proprietor, will rebuild peanut factory recently reported burned; 40x60 feet; four stories; cost \$2500; day labor; daily capacity, 1000 bushels of peanuts. (See "Machinery Wanted.")

La., Shreveport.—Airships.—Security Air Craft Co. has not determined upon location for factory to manufacture airships; C. W. Lawrence, president; B. Cannon, vice-president and manager; J. J. Hudson, secretary; T. D. Coupland, treasurer; present main office and address, Longview, Tex. (Recently reported incorporated with \$250,000 capital stock.)

La., Shreveport.—Computing Bins.—National Computing Bin Co., Ltd., incorporated with \$100,000 capital stock by L. B. Thomas and R. H. Jolley.

Md., Baltimore.—Paper.—Paper Products Co., W. Waterman, manager, 2405 W. Franklin St., will erect factory building; two stories; 76x77 feet; brick and stone; concrete foundation; cost about \$3500; contract awarded to Felix McGinty, 827 E. Chase St., Baltimore.

Md., Baltimore.—Corks and Seals.—Crown Cork & Seal Co., 1501 Guilford Ave., will erect stack to plant at Guilford and Girard Aves.; stone and brick; cost \$5500.

Miss., Wiggins.—Pickling, etc.—American Pickle & Canning Co., P. H. Roberts, manager, will build and equip canning and pickling plant; sugar-cane syrup, pickles, catsup, hominy, etc. (See "Canning and Pickling Plants and Machinery Wanted.")

Mo., Branson.—White River Manufacturing Co. incorporated with \$25,000 capital stock by C. M. Ketcham, G. T. Parnell and C. A. McCance.

Mo., Joplin.—Tape-sealing Device.—J. H. Huse, C. L. Moon, W. W. Christensen, Ira Bell and E. T. Frick organized company to manufacture patented tape-sealing device.

Mo., De Soto.—Gas.—Citizens' Gas & Fuel Co. incorporated with \$100,000 capital stock by John H. Gibbs, 3825 Labadie Ave.; Albert J. Robus, Henry C. Dureing, Joseph Stevens and Julius M. Klein; will erect gas plant; secured 20-year franchise.

Mo., Kansas City.—Rings.—Gate City Ring Manufacturing Co. incorporated with \$5000 capital stock by T. E. Roderick, C. T. Rainsburg and Edgar Seaman.

Mo., St. Louis.—Bakery.—McKinney Bread & Baking Co. incorporated with \$2000 capital stock by Dwight D. Currie, Anthony A. S. Holleran and Abe Lowenhaupt.

Mo., St. Louis.—Brewery.—Anheuser-Busch Brewing Association will repair roof of stockhouse No. 7; cost of repairs \$5000. (Recently reported damaged by fire.)

Mo., St. Louis.—Screw Products.—Western Screw Products Co. incorporated with \$3000 capital stock by John T. Soy, Edward J. Moeller and Joseph J. Hagen.

N. C., Black Mountain.—Pulp Plant.—Campbell & Dickey of United States Spruce Co., Marion, Va., will erect pulp plant of 40 tons daily capacity in connection with sawmill, etc. (See "Lumber Manufacturing.")

N. C., Durham.—Gas.—Carolina Light & Power Co. is proceeding with proposed improvement to gas plant; will install additional tank with storage capacity of 150,000 cubic feet gas; retort bench to manufacture 70,000 cubic feet gas daily, washer and condenser; total capacity when improvements are completed will be about 300,000 cubic feet per day; cost about \$40,000; R. W. Miller, general manager.

S. C., Spartanburg.—Abattoir.—Charles Moon will expend \$7000 to erect abattoir 36x50 feet, with additions; construction by owner. (Recently noted.)

Tenn., Cherokee.—Gloves.—Cherokee Glove Co., S. A. Nance, president and manager, 1601 Eighth Ave. North, manufactures cloth gloves; daily capacity, 75 dozen pairs. (Recently noted incorporated with \$5000 capital stock.)

Tenn., Chattanooga.—Corrugating.—Special dispatch to Manufacturers Record says: "Wheeling Corrugating Co., Wheeling, W. Va., plans erection of new plant on property; cost \$50,000 to \$100,000."

Tenn., Blountville.—Herb Manufacturing Co. incorporated with \$50,000 capital stock by H. J. Herb, Roy W. Perry, J. A. Hudson and others.

Tenn., Memphis.—Flavoring Extracts.—Luck-Ola Company, B. A. Shepherd, president, 372 S. Main St., will operate plant to manufacture flavoring extracts. (Recently noted incorporated with \$25,000 capital stock.)

Tenn., Nashville.—Valves, Hydrants, etc.—William G. Cummins, Pittsburg, Pa., will establish plant to manufacture water-works materials.

Tenn., Nashville.—Oil Refinery.—A dispatch

to Manufacturers Record says: "Standard Oil Co., 26 Broadway, New York, reported as contemplating erection of \$5,000,000 oil refinery; options taken for site." An official of the company wires to Manufacturers Record: "Standard Oil Co. has no knowledge of any proposed oil refinery at Nashville."

Tenn., Sparta.—William Lyles Manufacturing Co. incorporated with \$5000 capital stock by William Lyles, R. L. Lyles, M. E. Brown, J. A. Peek and J. A. Peek, Jr.

Tex., Dallas.—Water Meters.—Standard Water Meter Co. incorporated with \$10,000 capital stock by G. K. Garrison, C. A. Chase and T. P. Roberts.

Tex., El Paso.—Plumes.—Southwestern Ostrich Farms, T. W. Kemp, manager, contemplates establishment of factory to prepare ostrich plumes. (See "Land Developments.")

Tex., Llano.—Monuments.—Teich Monument Co. incorporated with \$75,000 capital stock by Frank Teich, Alfred J. Ridder and George Bodet.

Va., Bedford City.—Medicine.—Improved Stock & Poultry Medicine Co. organized with C. W. Gills president, George W. Johnson secretary-treasurer, G. C. Dudley sales manager; secured building to be equipped for manufacturing stock and poultry medicine, etc.

Va., Floyd.—Brake Lever.—American Brake Lever Co., V. M. Sowder, president, contemplates equipping plant to manufacture brakes for vehicles; plans not determined. (Recently noted incorporated with \$15,000 capital stock.)

Va., Norfolk.—Bakery.—S. L. Nusbaum & Co., 600 Citizens' Bank Bldg. (representing local capitalists), will erect and equip bakery. (See "Machinery Wanted.")

Va., Richmond.—Tobacco.—Larus Bros. Company will, it is reported, erect tobacco factory.

Va., Richmond.—Rubber Stamps.—Paragon Stamp Works incorporated with \$5000 capital stock by W. E. Harvey, president; L. P. Selden, vice-president; L. A. Conrad, secretary-treasurer.

W. Va., Parkersburg.—Gas and Fuel.—Wood County Gas & Fuel Co. incorporated with \$25,000 capital stock by A. T. Kreps, John T. Harris, H. L. Woodyard, E. C. Scherr and others.

MOTORS AND GARAGES

Ala., Montgomery.—N. J. Bell estate awarded contract to J. O. Estes, Montgomery, to erect garage at Montgomery and Moulton Sts. for Vandiver Automobile Co.; one story; brick; 76x153 feet; will contain storage-room, showroom; machine, work and repair shops, etc.; cost \$8903; plans by Fredrick Ausfeld, Montgomery.

D. C., Washington.—J. Maury Dove, 12th and F Sts. N. W., awarded contract to J. B. Holtzclaw to erect garage near 16th and U Sts. N. W.; two stories; brick; cost \$4000.

Ga., Gainesville.—Mrs. J. T. Telford awarded contract to George Matthews, Gainesville, for brick work on garage; 45x100 feet. (See "Contracts Awarded, 'Stores.'")

Ky., Louisville.—Clark Motor Car Co. increased capital stock from \$20,000 to \$60,000.

La., Donaldsonville.—Donaldsonville Garage & Automobile Co. organized with \$10,000 capital stock; James P. Kock, president; K. A. Aucolin, vice-president; A. A. Sarradet, secretary; Adolphe Netter, treasurer.

Md., Baltimore.—Mar-Del Mobile Co., George Miller, proprietor, Mt. Royal Ave. and Charles St., will erect addition to garage; brick construction; about 120x60x40 feet; separate room for furnishing gasoline to automobiles; will provide total floor space of 100,000 square feet.

Mo., Carthage.—Dr. Watt Jones of Baxter Springs, Kans., is reported as contemplating establishment of plant to manufacture motors to be attached to vehicle, plow or heavy wagon.

Md., Frederick.—James E. Solt, E. Patrick St., will erect addition to garage; will about double capacity; 40x60 feet; two stories.

Md., Frederick.—Ideal Garage Co. will absorb Frederick City Garage; will erect garage at 112-114 E. Patrick St.; 55x234 feet. storage capacity for 75 cars; machine shop in rear.

N. C., Fayetteville.—Consolidated Motor Co. will conduct plant equipped for general automobile repairs. (Recently reported incorporated with \$25,000 capital stock by J. U. McKeithan and associates.)

N. C., Mt. Airy.—Thomas J. Smithwick contemplates erection of machine plant and garage; 32x100 feet; fireproof construction; brick; cement floors; plans and construction by owner; machinery will cost about \$1500

and include shaper, lathe, drill-press, power back-saw, hand tools, dies, etc.

S. C., Easley.—J. C. Pickens will erect garage to be occupied by H. C. Hagood and C. W. Garrett; purchased and will install electric vulcanizer; construction begun.

Tex., Bryan.—Commercial Club is corresponding with Chicago (Ill.) parties relative to establishment of automobile factory.

Va., Richmond.—Kline Motor Car Co., S. W. Meek, vice-president and general manager, is having plans prepared for proposed automobile factory.

Va., Richmond.—Grasberger Vehicle Co., J. A. Grasberger, president, will enlarge plant from 95x60 feet to 150x60 feet; conduct repair shop, build automobiles and automobile trucks. (See "Woodworking.")

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Okla., Tulsa.—St. Louis & San Francisco Railroad, F. G. Jonah, chief engineer, St. Louis, Mo., will erect 22-stall roundhouse in West Tulsa.

Tenn., Nashville.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., purchased 225 acres near Nashville, and will, it is reported, build shops and switch yards.

Tenn., Etowah.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will build car-repair shops; cost \$20,000; construction begun.

W. Va., Hardman.—Baltimore & Ohio Railroad Co., F. L. Stuart, chief engineer, Baltimore and Charles Sts., Baltimore, Md., will erect two-stall engine-house, small power plant, machine shop, oil and sandhouse; M. A. Long, architect; construction begun.

ROAD AND STREET WORK

Ala., Anniston.—Calhoun county will not vote November 15 on \$300,000 bond issue for road improvements; revoked call for election; I. E. Watson, clerk. (Recently noted.)

Ala., Birmingham.—City will improve additional streets; work will include grading, macadamizing, bituminous binder macadam paving, combined curb and gutter and sidewalk paving; also sewer construction; bids opened October 17; Maury Nicholson, City Engineer. (See "Machinery Wanted.")

Ala., Decatur.—City of Decatur, New Decatur and North Alabama Traction Co. will pave Lee St. with asphalt macadam; cement concrete car track way and gutters; date of opening bids not settled; W. A. McCalla, engineer in charge; E. W. Collier, City Clerk. (Recently noted.)

Ala., Demopolis.—City will pave Walnut and Washington Sts. Address The Mayor.

Ala., Greensboro.—Hale county will, it is reported, vote February 6 on \$100,000 bond issue for road construction. Address County Commissioners.

Ala., Hamilton.—Marion county will grade, drain and surface with gravel about 2½ miles of State-aid road; bids received until November 15; will also receive bids until same date for continuing road for 11 miles farther; W. S. Keller, State Highway Engineer, Montgomery, Ala. (See "Machinery Wanted.")

Ala., Huntsville.—City awarded contract to Southern Asphalt & Construction Co., Birmingham, Ala., to pave Eustis and Meridian Sts. (Recently mentioned.)

Ala., Mobile.—North Mobile Development Co. awarded contract to Jett Bros. of Mobile to grade streets in North Mobile.

Ala., Selma.—Dallas county awarded contract to Bradford & Co., Montgomery, Ala., to construct 18 miles of road; cost about \$20,000.

Ala., Uniontown.—City voted \$10,000 bond issue to lay cement sidewalks. Address The Mayor.

Ark., Little Rock.—City will grade, gutter, curb and build concrete sidewalks and crossings on 19th, 21st and 23d Sts. from High to Wolfe Sts., Marshall from Wright Ave. to 24th St., and build parkway on Marshall St.; bids received until October 19; William Parkin, secretary of district. (See "Machinery Wanted.")

Fla., Clearwater.—Town contemplates laying various cement sidewalks. Thomas J. Sheridan, Town Clerk.

Fla., Green Cove Springs.—M. W. Griffin, clerk Clay county, states election will be held not later than December 1 for creation of special road and bridge district; if carried, tax will be levied and road built. (Recently noted.)

Fla., Jacksonville.—Duval county will clear, grub and grade Pensacola Rd. from point three miles west of present hard-surface road

to and through Marietta; bids received until October 27; Gall L. Barnard, County Engineer. (See "Machinery Wanted.")

Fla., Jacksonville.—Duval county will receive bids until October 20 for paving St. Johns Ave. and Lake Shore Drive from city limits to McGirts Creek (recently mentioned) with asphalt macadam; also until October 27 for paving portion of Lincoln Ave. and Mayport Rd.; Gall L. Barnard, County Engineer. (See "Machinery Wanted.")

Fla., Monticello.—Jefferson county will construct sand-clay road; work begun. Address County Commissioners.

Fla., Palatka.—City awarded contract for about 15,000 square yards brick paving, with concrete curbing. Address The Mayor. (Recently mentioned.)

Ga., Augusta.—J. G. White Company (contractor for laying underground wires) awarded contract to Georgia Engineering Co. of Augusta to repave trenches on Broad St. with brick.

Ga., Quitman.—City will vote on \$23,000 bond issue for street paving. Address The Mayor.

Ga., Waycross.—City will construct 35 miles of sidewalks; 6 feet wide in residential section and from 8 to 12 feet wide in business district. Address The Mayor.

Ky., Louisville.—City's plans for paving Broadway include 16,145 square yards of asphalt paving, 1675 square yards of vitrified brick and 120 square yards of granite paving; D. R. Lyman, City Engineer; contract recently noted awarded to Barber Asphalt Paving Co., Louisville, at \$23,203.69.

Ky., Louisville.—Board of Public Works opened bids for paving 4th St. from Jefferson to Walnut St. Henry Bickel is lowest bidder at \$14,798. (Recently mentioned.)

Ky., Elkton.—Todd county contemplates construction of about 14 miles of Jefferson Davis highway; Fann district and Elkton and Daysville district will probably appropriate \$7000 of road fund; about \$3000 additional will also be available. Address County Commissioners.

Ky., Paducah.—City awarded contract to J. B. Gardner to grade and gravel streets and walks in Oak Grove Cemetery.

La., Houma.—City will construct 2½ miles of concrete sidewalks on Barrow, Gabasse and part of Main St. Address The Mayor.

La., New Iberia.—City voted \$35,000 bond issue to construct 12-mile model road to Jeanette, La. Address The Mayor.

Miss., Brandon.—Rankin County Highway Commission will construct 60 miles of road; bids received November 6; J. A. Hammack, engineer, Brandon. (See "Machinery Wanted.")

Miss., Jackson.—City's contract (recently noted awarded to Southern Asphalt & Construction Co., 623 First National Bank Bldg., Birmingham, Ala.) covers about 17,000 square yards sheet asphalt paving, grading curbing on West Capitol St.; cost about \$40,000; J. I. Pierce, engineer in charge.

Miss., Pontotoc.—Town will construct concrete walks; bids received until October 20; O. J. Knox, Town Clerk. (See "Machinery Wanted.")

Mo., Kansas City.—City awarded contract to McTernan & Halpin Construction Co., 25th and Walnut Sts., Kansas City, at \$56,000 to grade McGee St. and Traffic Way; work consists of 30,000 cubic yards of earth removal.

Mo., Kansas City.—J. C. Nichols Land Co. will construct several miles of paving, granite sidewalks and curbing throughout Club Heights; awarded contract for 115,000 yards sheet asphalt paving, grading and curbing on West Capitol St.; cost about \$40,000; J. I. Pierce, engineer in charge.

Mo., Marcelline.—City, B. B. Putnam, Mayor, awarded contract to Fred Clark to construct seven blocks vitrified brick paving recently noted; C. G. Biggers, engineer.

Mo., Neosho.—Newton county will expend \$4000 to construct road from Diamond to county line; crushed stone; Rice Hunt of Joplin, Mo., is builder; no bids; Gabe Brown, Granby, Mo., engineer. (Recently noted.)

Mo., St. Louis.—City awarded contracts for paving alleys with vitrified brick to Ruecking Construction Co., Daniel Murphy, Harry F. Homan, Frank A. Stiers, G. Eyerman & Bro., Timothy E. Cavanaugh and Shraluka Construction Co., all of St. Louis; total amount, \$64,500.

Mo., University, P. O. St. Louis.—Timothy Moloney, 205 N. 6th St., St. Louis, has contract at \$24,000 for grading and excavation at Mary Sand Terrace.

N. C., Lillington.—Harnett county will vote December 12 on \$100,000 bond issue for

road construction; V. C. Matthews, chairman Road Commissioners.

N. C., Salem, P. O. Winston-Salem.—Town will vote December 26 on \$15,000 bond issue for street improvements; F. A. Fogle, Mayor. (Recently mentioned.)

N. C., Statesville.—Iredell county awarded contract to J. T. Platt, Greensboro, N. C., to grade Buffalo Shoals Rd. from Statesville to shoals on Catawba River.

N. C., Wilmington.—City will construct 1000 square yards sidewalks and grade Brunswick St.; bids received until October 24; P. Q. Moore, councilman streets and wharves. (See "Machinery Wanted.")

Okla., Bartlesville.—City will pave Osage Ave. from 1st to 4th St. and Shawnee Ave. from 4th to 11th St.; width, 40 and 30 feet, respectively; bids received until October 21; J. V. Delameter, City Clerk. (See "Machinery Wanted.")

Okla., Oklahoma City.—Oklahoma County Good Roads District No. 1 has organized and will vote on \$1,250,000 bond issue for construction of about 155 miles of roads, of which 134 miles will be of asphaltum surface and remaining 19 miles of crushed rock. Address County Commissioners.

Okla., Pawhuska.—Big Heart township of Osage county voted \$50,000 bond issue for road improvements. Address County Commissioners.

Okla., Sapulpa.—Creek county will vote October 24 on \$125,000 bond issue for road construction. Address County Commissioners.

Okla., Tulsa.—City paving includes contracts amounting to \$200,000 let to Eureka Construction Co., 1308 Carter Bldg., Houston, Tex., for 85,000 yards sheet asphalt, 1½ bid, 1½ top on Texas asphalt; Cleveland-Trinidad Paving Co., Cleveland, O., at \$26,000, 10,000 yards paving; Parker-Washington Company, St. Louis, Mo., at \$4000, 1800 yards on brick; 70,000 yards to be readvertised soon; T. C. Hughes, City Engineer. (Recently noted.)

S. C., Woodruff.—City contemplates street improvements, including granolithic gutters, sidewalks, etc.

Tenn., Gainesboro.—Jackson county will probably vote December 2 on bond issue of \$150,000 for roads and streets. Address County Commissioners. (Recently noted.)

Tenn., Greensboro.—Jackson county will vote December 9 on \$150,000 bond issue for road improvements. Address County Commissioners.

Tenn., Hill City.—Hamilton County Bond Commission awarded contract to Noll Construction Co., Chattanooga, Tenn., to pave North Market St. and Frazier Ave.; E. E. Betts, engineer Hamilton County Road Commissioners. (Recently mentioned.)

Tenn., Knoxville.—Improvement District No. 91 awarded contract to Barber Asphalt Paving Co. (main office Philadelphia, Pa.) for paving; cost about \$5,000; J. E. Thompson, City Engineer.

Tenn., Madisonville.—Monroe County Commissioners have available \$150,000 for road construction, including grading and surfacing; \$150,000 to be expended later when ordered by court, making total of \$300,000; date of opening bids not set; engineer not employed. (Bond issue of \$150,000 recently noted ordered.)

Tenn., Nashville.—City will expend \$4000 to construct granite curb and sidewalk on 3d, 4th and 17th Sts.; lines and grades furnished by City Engineer; contract recently noted awarded to Fisher Concrete Co., Nashville.

Tex., Farmersville.—City is having surveys made for street improvements; \$10,000 bond issue voted. Address The Mayor.

Tex., Fort Worth.—City awarded contract to General Construction Co. of Fort Worth to pave with bitulithic E. 11th and E. 12th Sts.; City Commission ordered paving of Peach St. from Boaz to Live Oak St. and Terrell St. from Evans Ave. to International & Great Northern Railway; J. D. Trammell, City Engineer.

Tex., Galveston.—M. Murch, County Auditor, may be addressed relative to construction of road to connect Galveston, Chambers and Jefferson counties. (Recently noted.)

Tex., Hamlin.—City awarded contract to McDonald Construction Co., Austin, Tex., to pave six blocks of Central Ave. with granite concrete paving, and to E. Bigbee of Hamlin to pave seven blocks with asphalt macadam.

Tex., Harlingen.—City voted \$32,000 bond issue for street, water and light improvements. Address The Mayor. (Previously mentioned.)

Tex., Houston.—Houston Ice & Brewing Co. will cover unnavigable portion of Buffalo Bayou along both sides of its property

above Miami St. bridge; covering will be of reinforced concrete; roadway 45 feet wide; length, 190 feet; construction begun.

Tex., Houston Heights.—City voted \$180,000 bond issue for street improvements as follows: Paving Houston Heights Blvd., \$121,301; paving intersections, \$12,000; curbing esplanades, \$1239; headers, \$303; engineering and supervision, \$500; shelling eight or nine miles of streets, \$29,000; D. Barker, Mayor. (Recently mentioned.)

Tex., Houston.—Condit & Henderson will, it is reported, build streets in Bellair, Westmoreland Farms.

Tex., Lexington.—City contemplates holding election to vote on \$100,000 bond issue for road construction. Address The Mayor.

Tex., Palestine.—Anderson County Justice Precinct No. 1 will vote November 11 on \$150,000 bond issue for road improvements. Address County Commissioners.

Tex., Paris.—City will pave portion of West Bonham St. with rock asphalt or other bituminous pavement; cost of former estimated at \$43,039.24 and of latter at \$42,482.14; five-inch concrete foundation; Edward H. McCulston, Mayor.

Tex., Pecos.—Reeves county will vote on \$200,000 bond issue for road construction.

Tex., San Angelo.—City awarded contract to Crooked Wooden Block Co., Gulfport, Miss., to pave five blocks in business section.

Tex., San Antonio.—City Council appropriated \$43,424.30 for paving Crockett, Alamo, Garden, South Pecos and other streets. Address The Mayor.

Tex., Sherman.—Grayson county will vote October 30 on \$300,000 bond issue for road improvements. Address County Commissioners. (Recently mentioned.)

Tex., Wichita Falls.—Wichita Falls, Precinct No. 1, voted \$150,000 bond issue for road improvements. Address County Commissioners.

Va., Norfolk.—City appropriated \$5000 for building sidewalks in Tenth Ward. Address The Mayor.

Va., Portsmouth.—Seventh Ward Local Board awarded contract to R. P. Denby, Norfolk, Va., at \$9174 to grade 10 streets, and to Louis Lawson, Norfolk, Va., at \$30,116 for concrete curb and gutters and concrete walks.

W. Va., Grafton.—City awarded contract to W. P. Withers at \$1.36 per square yard to pave West Main St. with brick.

W. Va., Renicks Valley.—Greenbrier county will grade Summerville Rd. from intersection of Mann Rd. to intersection of Camp Rd. at gum tree; bids opened October 21; John E. Dougher, County Road Engineer. (See "Machinery Wanted.")

W. Va., Piedmont.—City will expend \$10,000 to construct brick sidewalk and concrete curb on Fairview St.; W. H. Harvey, Frostburg, Md., engineer; Charles T. Neff, W. A. Shuey and P. J. O'Brien, street committee. (Recently noted to receive bids until October 21.)

SEWER CONSTRUCTION

Ala., Birmingham.—City will construct sewer; bids received until October 17; Maury Nicholson, City Engineer. (See "Machinery Wanted.")

Ark., Osceola.—City has plans by J. Pride & Fairley of Osceola for sewer system; cost \$20,000; S. L. Gladish, Sewer Commissioner.

Ark., Harrison.—City accepted proposition of Jack Shelton of Shelton Engineering Co., Miami, Okla., to furnish plans and specifications for sewer system and water-works; \$50,000 bond issue contemplated; George C. Frew, acting Mayor. (Recently mentioned.)

Ark., Marked Tree.—City will construct system of sewers in and for water and sewer improvement district No. 1; cost \$13,500; J. A. Wright, engineer in charge; M. W. Hazel, secretary. (See "Water-works.")

Ky., Louisville.—Commissioners of Sewerage, P. L. Atherton, chairman, 603-607 Equitable Bldg., will receive bids until October 20 to construct 32d St. and Dunesall St. sewer, contract No. 25. (See "Machinery Wanted.")

Ky., Louisville.—Board of Public Works authorized construction of sewers on Walnut and Underhill Sts. and Victor Ave.; cost \$7230. Andrew Kast, Superintendent of Sewer Construction.

Ky., Newport.—Board of Aldermen passed ordinance providing for \$12,000 bond issue for construction of sewers in Districts A, B, C and D. Address The Mayor.

La., Monroe.—City voted to extend sewer system. Address The Mayor.

La., Ruxton.—City contemplates constructing sewer system; cost about \$45,000. Address The Mayor.

Md., Baltimore.—Sewerage Commission, Calvin W. Hendrick, chief engineer, American Bldg., will petition Board of Estimates for \$4,000,000 for 1912 to be used toward construction of sewerage system; this will be taken from second sewerage loan of \$10,000,000. (Mentioned at various times.)

Md., Baltimore.—Maryland Sewerage & Disposal Co. incorporated with about \$75,000 capital stock by Walter B. Brooks, Commerce and Water Sts.; Patrick Flanagan, Calvert and Lexington Sts.; Edward H. McKeen, 115 W. Lombard St.; will erect sewage-disposal plants for Orangeville, Highlandtown, etc.; main offices will be in Baltimore.

Miss., Amory.—City will construct sewer system and water-works; Solomon-Norcross Company, Candler Bldg., Atlanta, Ga., engineers; J. A. Mayfield, Mayor; bond issue of \$65,000 recently noted voted for sewers and water-works. (See "Machinery Wanted.")

Miss., Brookhaven.—City contemplates construction of sewer system; cost \$20,000. Address The Mayor.

Mo., Excelsior Springs.—City defeated bond issue for sewer construction. (Recently noted.)

Mo., University, P. O. St. Louis.—Robert Wycoff, 2612 McRee Ave., St. Louis, has contract to furnish and lay sewer piping at Mary Sand Terrace.

N. C., Weldon.—City, W. W. Wiggins, Mayor, will expend about \$15,000 on sewer construction; terra-cotta pipe; date of opening bids not settled; engineer, W. C. Riddick, West Raleigh, N. C. (Recently noted.)

N. C., Salem, P. O. Winston-Salem.—Town will vote December 26 on \$10,000 bond issue for increasing sewerage facilities; F. A. Fogle, Mayor. (Recently mentioned.)

Okla., Oklahoma City.—Mayfield-Shaw Construction Co. is lowest bidder at \$3566.32 for construction of sewer in blocks 24 to 31, inclusive, Capitol Hill; Stokes Construction Co. at \$3560.48 for sewer in blocks 2 to 9, inclusive, Dale Addition, and at \$1757.59 for sewer in block 1, Dale Addition; Bob Farnman, City Clerk.

Okla., Pryor Creek.—City voted \$10,000 bond issue for sewer extension. Address The Mayor.

Tenn., Nashville.—City will construct sewer in 8, 1st St.; Board of Public Works invites bids.

Tenn., Nashville.—City Council appropriated \$200 for construction of sewer in Alley 202, between Fourth and Fifth Aves., and \$1200 for extension of Argyle Ave. trunk sewer.

Tex., Dallas.—Board of Commissioners will award contract within few days to construct concrete sewer on Pennsylvania Ave.; J. W. Smith & Son lowest bidders at \$34,912.78; J. M. Preston, City Engineer. (Bids recently noted.)

Va., Leeburg.—Town will vote November 11 on \$20,000 bond issue to construct sewer system and enlarge water-works. Address Town Clerk. (See "Water-works.")

TELEPHONE SYSTEMS

La., De Quincey.—De Quincey Telephone Co. incorporated with \$10,000 capital stock; J. M. Newhouse, president; J. H. Geidewell, vice-president, and W. R. Watkins, secretary-treasurer.

Tenn., Chattanooga.—East Tennessee Telephone Co., J. R. Porter, manager, contemplates further extension of telephone cables; proposes expenditure of \$30,000 to \$35,000 by February 1.

Tex., Bryan.—Bryan Telephone Co. contemplates improvements to telephone system.

Tex., Commerce.—Gulf Cities Telephone Co. proposes, it is reported, to place cable under ground and install flash-light police-alarm system.

Tex., Floresville.—Eureka Telephone Co. will erect two-story building; upper floor for telephone exchange. (See "Stores.")

TEXTILE MILLS

Ga., Tooecon.—Cotton Yarns.—Capps Cotton Mill, C. H. Dance, president, reported as to construct another dam on Upper Tooecon Creek for power purposes and install electric drive in plant.

Mo., St. Louis.—Hosiery.—Chester Knitting Mills, Chester, Ill., reported as to lease building and remove equipment from three plants in Illinois; capacity about 1000 pairs of hose daily.

N. C., Hildebran.—Cotton Yarns.—Henry River Manufacturing Co. plans to increase its capital stock from \$112,800 to \$157,800 to take up an indebtedness and improve plant. (Recently mentioned as to increase capital from \$125,000 to \$235,000.)

N. C., Forest City—Chambrays, etc.—Florence Mills reported as arranging to install finishing machinery for chambrays.

Tex., Brenham—Sheetings.—Brenham Cotton Mills will reorganize as Lone Star Cotton Mills; is overhauling equipment and preparing to operate plant. (Previously mentioned.)

WATER-POWER DEVELOPMENTS

S. C., Cheraw.—Carolina Power & Light Co., Charles E. Johnson, president, Raleigh, N. C., contemplates construction of power line to embrace Cheraw, Bennettsville, McColl, Hartsville, Darlington and Florence, S. C.

WATER-WORKS

Ala., Mobile.—City Commissioners authorized extension of water mains on Washington Ave., South Water St. and Broad St.

Ala., Mobile.—City will expend \$10,000 to extend water service to Oakdale and Bascombe Sts.; work includes 6-inch and 8-inch water main; construction begun; C. W. Soost, superintendent of Water Department. (Recently noted.)

Ark., Harrison.—City accepted proposition of Jack Shelton of Shelton Engineering Co., Miami, Okla., to furnish plans and specifications for water-works and sewer system; \$50,000 bond issue contemplated; George C. Frew, acting Mayor. (Recently mentioned.)

Ark., Little Rock.—Little Rock Railway & Electric Co. awarded contract to Meers & Dayton to erect pumping tower; cost \$5,000.

Ark., Marked Tree.—City will expend \$22,500 to construct water-works and \$13,500 for system of sewers in and for water and sewer improvement district No. 1; capacity of water-works 700,000 gallons; to include 100,000-gallon hemispherical-bottom steel tank on 70-foot tower; machinery will consist of gasoline engine and 550-gallon-per-minute-capacity triplex pumps, two units; J. A. Wright, engineer in charge; M. W. Hazel, secretary. (Recently noted to receive bids until October 20.)

Fla., Auburndale.—City will construct water-works. Address The Mayor.

Fla., Fort Barrancas.—Capt. A. J. Cooper, constructing quartermaster, awarded contract to Newport Construction & Engineering Co. (recently noted as lowest bidder), Newport News, Va., to make extension to water mains; cost \$4400.

Fla., Pensacola.—City will extend water-works; cost about \$25,000; about 65 blocks of additional mains; bids received until November 15. Address The Mayor.

Ky., Corbin.—City will vote in November on bond issue to construct water-works; J. W. Wyrick, Mayor. (Recently noted.)

La., Haynesville.—City contemplates construction of water-works; cost \$10,000. Address The Mayor.

La. Monroe.—City voted to extend water-works. Address The Mayor. (Recently mentioned.)

Miss., Amory.—City will construct water-works and sewers; Solomon-Norcross Company, Chandler Bldg., Atlanta, Ga., engineer; J. A. Mayfield, Mayor; bids opened November 7; bond issue of \$65,000 recently noted voted for construction of water-works and sewers. (See "Machinery Wanted.")

Miss., Vicksburg.—City will vote on bond issue for construction of water-works; City Council accepted report of committee, Ben Steln, chairman, recommending plans by A. L. Dabney, engineer, calling for following: 27 miles of mains from 4 to 16 inches diameter, of which 8 per cent. are 4 inch, 58 per cent. 6 inch and 34 per cent. larger piping; 245 fire hydrants; three 250-horse-power water-tube boilers, with mechanical stokers and concrete stacks; 3 high-service pumps, with total capacity of 10,000,000 gallons per 24 hours; 3 low-service pumps, with total capacity of 9,000,000 gallons; 2 settling basins, with 1,500,000 gallons combined capacity; filters of 2,000,000 gallons daily capacity, with additional tanks for increased capacity as required; clear-water basin in two compartments, with total capacity of 750,000 gallons; estimated cost, \$340,000.

N. C., Weldon.—City, W. W. Wiggins, Mayor, will expend about \$25,000 on water-works recently noted; daily capacity, 500,000 gallons; erect pump-house costing \$2000; install two pumps, filter plant and construct settling basin and elevated tank; engineer, W. C. Riddick, West Raleigh, N. C.; proposals to be addressed to W. T. Shaw, Weldon. (See "Machinery Wanted.")

Okla., Braggs.—City will construct water-works recently mentioned; bids received until 8 P. M. October 24 by board of trustees; plans, etc., in office of J. J. Johnson, Clerk;

Winters & Dove, First National Bank Bldg., Fort Smith, Ark., previously noted as engineer. (See "Machinery Wanted.")

Okla., Bristow.—City will make extension to water-works, including reservoir, installation of pipe, boiler and pump; cost \$5000; G. S. Carma, Mayor. (Bond issue of \$5000 recently noted.)

Okla., Chandler.—City will drill artesian well; bids received until October 24; J. Bert Foster, City Clerk. (See "Machinery Wanted.")

Okla., Lawton.—City and Gulf, Colorado & Santa Fe Railway, F. Merritt, chief engineer, are considering construction of 1,000,000-gallon reservoir; estimated cost, \$200,000.

Okla., Olustee.—City voted \$20,000 bond issue for construction of water-works. Address The Mayor.

Okla., Ochedata.—Ochedata Light & Water Co. incorporated by J. F. Hughes and others. (See "Electric Plants.")

Okla., Pryor Creek.—City voted \$70,000 bond issue for water-works extension. Address The Mayor.

S. C., Columbia.—City will enlarge water-works water-power plant; contemplates new 5,000,000-gallon pump with water wheels, etc.; W. F. Stieglitz, council superintendent, Water-works Department, can furnish information. (Recently noted to construct mains.)

S. C., Johnston.—City defeated \$30,000 bond issue for water-works construction. Address The Mayor. (Recently mentioned.)

Tenn., Chattanooga.—City Water Co. filed mortgage providing for issuance of \$1,729,000 of bonds for enlarging and extending water-works as may be required.

Tex., Archer City.—City will construct water-works; purchased site containing five acres to construct reservoir; 95,000 gallons capacity. (Bond issue recently noted voted.)

Tex., Brownwood.—City will vote November 6 on \$15,000 bond issue for extension of water-works. Address The Mayor.

Tex., Harlingen.—City voted \$32,000 bond issue for water, light and street improvements. Address The Mayor. (Previously mentioned.)

Tex., Malone.—Malone Water Co. incorporated with \$3125 capital stock by L. F. Weeks, A. D. Walling, T. Stockton and others.

Tex., Rogers.—City awarded contract to Hamilton Bros., Taylor, Tex., to construct six-inch water-pipe line from Leon River to reservoir, distance of four miles.

Tex., Saint Jo.—City voted bond issue for water-works. Address The Mayor.

Tex., Cleburne.—City will construct water-works; cost \$222,000; plans by Burns & McDonnell, Scarritt Bldg., Kansas City, Mo.

Va., Leesburg.—Town will vote November 14 on \$30,000 bond issue to supplement present water-works and construct sewer system; proposed to build reservoirs on mountains several miles distant and convey water by gravity throughout town. Address Town Clerk.

Va., Norfolk.—City will construct water-pipe line connecting Lakes Bradford and Joyce with Little Creek; contract for piping awarded.

W. Va., Mannington.—City defeated bond issue for water-works improvements; J. R. Burt, Mayor. (Recently noted.)

WOODWORKING PLANTS

Ala., Gadsden.—Showcase and Cabinet Works.—W. A. Riglar contemplates establishing showcase and cabinet factory.

Ala., Mobile.—Crossarms.—J. E. Hellams Manufacturing Co. will operate recently-noted plant to manufacture crossarms; officers not elected; will occupy erected building; machinery mainly installed; capacity, one car daily. (See "Machinery Wanted.")

Ark., Batesville.—Excelsior.—Batesville Excelsior Co., Charles F. Cole, president (recently noted incorporated with \$25,000 capital stock), acquired excelsior factory and will erect ironclad addition; cost \$1000. (See "Machinery Wanted.")

N. C., Concord.—Boxes.—Standard Manufacturing Co. organized with W. H. Gibson president, G. S. Klutz vice-president, J. A. Canon secretary-treasurer, to manufacture boxes.

N. C., Hickory.—Chairs.—Surry Chair Co., Elkin, N. C., will establish chair factory.

N. C., Hickory.—Handles, etc.—Hickory Handle & Manufacturing Co., recently noted incorporated (under N. C., Conover) with \$5000 capital stock, will be located at Hickory; removal from Conover; purchased plant of J. Hunsucker; manufactures handles, etc.; K. C. Menzies, president; J. L. Riddles, vice-

president; J. L. Cilley, secretary; A. L. Shuford, treasurer and manager.

Fla., Jacksonville.—B. K. Hall awarded contract to W. T. Hadlow Company, Jacksonville, to erect factory, etc., for Chapman's Carriage Factory, F. A. Chapman, proprietor; 52½x100 feet; three stories; mill construction; install 5000-pound hand-lift elevator; cost \$15,000; all material purchased. (Mr. Chapman recently noted to have secured 20-year lease on building.)

Miss., Enterprise.—Boxes.—James G. Miller, St. Louis, Mo., and J. K. Carlyle, Chicago, Ill., are considering construction of box factory. (See "Lumber Manufacturing.")

N. C., Asheville.—Furniture.—American Furniture Manufacturing Co. proposes to erect six buildings to be equipped for manufacturing furniture; site 3¼ acres; Harmon Miller, president; J. C. Pritchard, vice-president; F. S. Kennet, manager and treasurer. (Recently reported incorporated with \$25,000 capital stock.)

N. C., Denton.—Chairs.—Denton Chair Co. organized with C. C. Shaw, president; B. L. Harrison, vice-president; M. E. Boone, secretary-treasurer; plans not determined. (Recently noted incorporated with \$25,000 capital stock.)

Tenn., Bristol.—Paxton Lumber Co. will build planing mill in connection with wood-working plant.

Tenn., Carthage.—Hubs and Spokes.—J. C. Bliby will, it is reported, establish hub and spoke factory.

Va., Norfolk.—Boxes, etc.—Growers' Manufacturing Co. incorporated with \$25,000 capital stock to manufacture boxes, barrels, etc.; E. L. Simpson, president; J. P. Lambert, vice-president; D. F. Cromwell, secretary; A. M. Hart, treasurer and general manager.

Va., Richmond.—Vehicles, etc.—Grasberger Vehicle Co., J. A. Grasberger, president, will enlarge plant from 95x60 feet to 150x60 feet; conduct general repair shop and build vehicles, including automobile trucks, automobiles, etc. (Recently reported incorporated with \$50,000 capital stock under "Miscellaneous Enterprises.")

BURNED

Ark., Clio.—Bluff City Lumber Co.'s saw-mill damaged; loss about \$3000.

Ala., Columbia.—Andrew Williams' bottling establishment and store building; loss about \$6000.

Ala., Florence.—B. B. Garner's store at Stewart's Spring; building owned by James Burtwell; loss \$5000 to \$6000.

Ala., Keener.—Sanders & Sanders' cotton gin; loss about \$5000.

D. C., Washington.—Washington Tobacco Co.'s warehouse at 618 Pennsylvania Ave.; loss on building about \$10,000.

Fla., Worthington Springs.—Worthington Hotel, owned by Mr. Lamb; loss \$12,000 to \$15,000.

Ga., Augusta.—Georgia & Florida Railway's trestle over Bushy Creek; W. A. Swallow, chief engineer.

Ga., Cochran.—Avery Horne's cotton gin; estimated loss, \$2000.

Ga., Farmville.—R. F. D. from Calhoun.—Stewart & Hardy's cotton gin and grist mill; loss about \$10,000.

Ga., Kinderhook.—Young, Burton & Co.'s turpentine distillery; loss \$1500 to \$2000.

Ga., Maysville.—Dry Pond Stock Co.'s cotton gin; loss \$5000.

Ga., Norcross.—Southern Oak Leather Co.'s warehouse and barn; loss \$5000.

Ga., Sandersville.—Thomas Summerlin's

three residences; Neman Wood's residence; total loss about \$8000.

Ky., Louisville.—Lyric Picture Theater at 19th and Market Sts.; owned by Mrs. Frank Berghelm of New Albany, Ky.

La., New Orleans.—Illinois Central Railroad's shed at Clara and Lafayette Sts.; loss about \$12,000; A. S. Baldwin, chief engineer, Chicago, Ill.

Md., Cambridge.—Joseph W. Phelps' barn and carriage-house; loss \$15,000.

Miss., Braxton.—J. K. Webster & Co.'s mill and cotton gin; loss \$7000.

Miss., Braxton.—J. K. Webster & Co.'s mill and cotton gin; loss \$7000.

Miss., Goodman.—Farmers' Union warehouse.

Miss., Magee.—Richardson & Kennedy's store.

Miss., Silver Creek.—Nelson Hotel, owned by A. J. Nelson.

Mo., Otterville.—A. C. Schultz's blacksmith shop; Edward Layne's lumber yard; Charles Hupp's warehouse; H. H. Everett's residence; total loss about \$15,000.

Mo., St. Louis.—National Pickle & Canning Co.'s branch plant at 3d and Cedar Sts.; loss \$20,000.

Mo., St. Louis County.—Residence at Manchester and Berry Rds., owned by William Marion Reedy, editor of The Mirror, St. Louis.

N. C., Spencer.—Southern Railway's blacksmith shop; H. Herman, chief engineer, 1300 Pennsylvania Ave. N. W.

Okla., Cache.—Block-Miller Company's lumber yard and store; loss about \$16,000.

Okla., Cache.—Block-Miller Hardware Co.'s store, lumber yard and implement sheds; loss \$15,000.

Okla., Catoosa.—Jeff Gravitt's store; C. W. Benedict's store; loss about \$5000.

Okla., Getelo.—Farmers' Union Gin, Mill & Elevator Co.'s cotton gin; loss \$10,000.

Okla., Sulphur Springs.—Charles H. Miller's building.

Tenn., Ellettsville.—R. F. D. from Bank.—Ellettsville Mills, owned by J. S. Patty; estimated loss \$8000.

Tenn., Lebanon.—F. B. Haliburton's store on Cumberland St.

Tenn., Memphis.—Building at Mulberry St. and Huling Ave., owned by Central Bank & Trust Co. and occupied by S. Devorkin; loss \$4500.

Tenn., Peryear.—Peryear Milling Co.'s flour mill; loss about \$9000.

Tex., Center.—Swearingen Hotel and sample-room, owned by Dr. P. G. Swearingen; loss about \$10,000.

Tex., Eldorado.—El Dorado Gin & Mill Co.'s cotton gin; loss about \$5000.

Tex., Gonzales.—Gonzales Cotton Oil & Manufacturing Co.'s cottonseed oil mill; estimated loss, \$5000.

Tex., Greenville.—Residences and stable owned by city; loss \$3000. Address The Mayor.

Tex., Houston.—Watts Chapel Baptist Church at Dowling St. and Lamar Ave.; loss several thousand dollars. Address The Pastor, Watts Chapel Baptist Church.

Tex., Paris.—George R. Hull's cotton gin.

Tex., Tucker.—Henry Glenn's cotton gin.

Va., Norfolk.—Four Company's building at Church and Water Sts. damaged; loss about \$4000.

Va., Richmond.—W. C. Boyd & Co.'s store; loss about \$25,000.

W. Va., Bakerton.—Washington Building & Lime Co.'s plant; loss about \$20,000.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ala., Birmingham.—J. G. Whitfield will erect store and apartment building. (See "Stores.")

Ark., Little Rock.—W. C. Ratcliff is having plans prepared by George R. Mann, Little Rock, for apartment-house at 6th and Scott Sts.; 150x140 feet.

Ga., Atlanta.—Fulton Properties Co., Albert Howell, Jr., president, Keiser Bldg., is having plans prepared by W. L. Stoddard, 30 W. 38th St., New York, for apartment building; 12 stories; fireproof construction; heating and lighting not determined; cost \$250,000; date of opening bids not set.

Ga., Savannah.—Collins Bros. Company will

expend \$15,000 to remodel buildings for apartments, stores and offices recently noted; plans and construction by owner. (See "Stores.")

Ky., Louisville.—W. H. Reeser of Reeser & Sons will erect four apartment-houses at 4th and A Sts.; three stories; six nine-room apartments; concrete floors; brick walls; court 82 feet wide, with trellis-covered pergola; site 275x200 feet; cost \$140,000; plans by and construction under supervision of owner.

Mo., Kansas City.—M. M. Beeks will erect brick apartment-house at 2429 Michigan Ave.; cost \$5000.

Mo., St. Louis.—Trade Realty & Building Co. will erect tenement-house; three stories; cost \$8000.

N. C., Raleigh.—Raleigh Development Co.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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will erect store, apartment and theater build-
ing. (See "Theaters.")

Okl., Oklahoma City.—Colfax Moulton of
Medlon Lighting Co. has plans by G. B.
Boon, Oklahoma City, for apartment-house;
three stories and basement; pressed brick;
stone trimming; cost \$30,000.

W. Va., Charleston.—Bradford Noyes and
others have plans by H. Rus Warne, Charle-
ston, for store and apartment building. (See
"Stores.")

ASSOCIATION AND FRATERNAL

Miss., Biloxi.—Benevolent and Protective
Order of Elks will open bids about Novem-
ber 1 to erect lodge building; 4x32 feet; ex-
terior walls pressed brick, terra-cotta and
stucco; cost \$25,000; plans by Stone Bros., 201
Pollock Bldg., Mobile, Ala. (Recently noted.)

Okl., Hobart.—Young Men's Christian As-
sociation contemplates erection of asso-
ciation and gymnasium building; cost about
\$10,000.

Tenn., Ocoee.—Pythian Sisters of Tennes-
see, Miss Mayme Mammoth, grand mistress
of records and correspondence, Hartsville,
Tenn., plans to erect lodge building.

Tex., Crystal City.—Ancient Free and Ac-
cepted Masons plan to erect lodge building;
two stories; brick.

Tex., El Paso.—Scottish Rite Benevolent
Association purchased lot at cost of \$20,000
and contemplates erection of Scottish Rite
cathedral to cost \$100,000; plans not de-
termined; construction will not begin for
several months. (Recently noted organized
by J. J. Ormsbee and others.)

Tex., Houston.—Grand Chapter of Eastern
Star will erect lodge building; Mrs. Carrie
B. Lane, chairman of committee.

Tex., Paris.—Benevolent Protective Order
of Elks will erect lodge building; three
stories; 8x10x8 feet.

Tex., Waco.—Ancient Free and Accepted
Masons plan to erect lodge building; four
stories; cost \$50,000.

BANK AND OFFICE

Ark., Helena.—S. A. Wooten of Wooten,
Davidson & Co., contemplates erection of
office building.

Fla., Lake City.—Columbia County Bank
will open bids October 26 to erect one-story
bank building; 35x90 feet; brick and stone
construction; cost \$10,000; plans and speci-
fications at office of architect, W. J. Snell,
Lake City, or will be sent to contractors de-
siring same.

Fla., Tampa.—Citizens' Bank & Trust Co.'s
building will be 79x100 feet; fireproof con-
struction; cost \$325,000; plans by Francis J.
Kennard, Tampa, and J. C. Llewellyn, Chi-
cago, Ill., associated architects. (Recently
noted.)

Ga., Atlanta.—Realty Trust Co. will expend
\$6000 for addition to building at 61-65 N. For-
syth St.

Ga., Savannah.—Collins Bros. Company
will expend \$15,000 to remodel buildings for
offices, stores and apartments recently noted;
plans and construction by owner. (See
"Stores.")

S. C., Greenville.—Mrs. Elizabeth Cleve-
land of Marietta, S. C., will remodel build-
ing on McBee Ave. for offices; will install
plate-glass front, etc.

S. C., Walterboro.—R. H. Wichman will
receive bids until noon October 31 to erect
building for bank, two stories and hotel;
brick; certified check for \$500, payable to
J. D. Newcomer, architect, Charleston, S. C.;
plans and specifications at office of archi-
tect at Charleston, or of Mr. Wichman at
Walterboro.

Tex., Floydada.—First State Bank will ex-
pend \$5000 to erect bank building; 25x100
feet; brick; plans by J. C. Goodwin, Plana-
view, Tex.; bids opened October 17. (Con-
tract recently noted awarded.)

Tex., Houston.—D. R. Beatty is reported
as contemplating erection of office building.
Va., Richmond.—Raphael Levy and I. H.
Kaufman are reported as considering erec-
tion of office building.

CHURCHES

Ark., Mt. Ida.—Mt. Ida Baptist Church
plans to erect edifice; Ernest Berry and
others, committee.

Ark., Stamps.—Catholic congregation will
erect edifice. Address The Pastor, Catholic
Church.

D. C., Washington.—Washington Hebrew
Congregation Church, 8th St., between H and
I Sts., Rev. Abram Simon, rabbi, 2802 Cathe-
dral Ave. N. W., plans to erect temple.

D. C., Washington.—St. Martin's Catholic

Church, North Capitol and T Sts. N. W.,
Rev. Eugene Hannon, pastor, is reported to
erect edifice; cost about \$80,000.

Fla., Brandtontown.—Presbyterian church
will erect edifice; cost about \$10,000. Ad-
dress The Pastor, Presbyterian Church.

Fla., St. Petersburg.—J. D. Jones is chair-
man of trustees of Christian Church to be
organized; plans erection of edifice.

Ga., Columbus.—Central Christian Church
plans to erect edifice. Address The Pastor,
Central Christian Church.

Ga., Macon.—St. Joseph's Catholic Church
will install three marble altars; largest to
cost \$10,000.

Ga., Marshallville.—Methodist Church will
erect edifice; cost about \$25,000. Address
The Pastor, Methodist Church.

Ga., Marshallville.—Baptist congregation
will erect edifice; brick; cost \$20,000. Ad-
dress The Pastor, Baptist Church.

Ga., Quitman.—Beulah Baptist Church is
having plans prepared by W. B. Camp for
edifice; 44x88 feet; brick; mill construction;
steam heat; electric lighting; cost \$10,000;
plans will be ready for bids November 1.

Md., Baltimore.—Bethany Methodist Pro-
testant Church, Rev. P. W. Crosby, pastor,
has plans by Owens & Sisco, 1005 Continental
Bldg., Baltimore, for edifice at Lafayette
Ave. and Washington St.; two stories; elec-
tric lights; steam heat; stone; slate roof;
stained-glass windows. Contractors esti-
mating are B. F. Bennett Building Co., 123
S. Howard St.; Consolidated Engineering
Co., Emerson Tower Bldg.; John K. Melver,
309 Wilson Bldg.; Gladfelter & Chambers,
Parkdale and Maryland Aves., and W. Simp-
son, all of Baltimore.

N. C., Charlotte.—Villa Heights Associated
Reformed Church, Rev. E. G. Carson, pastor,
will open bids in two or three weeks to erect
edifice; 39x33 feet; stoves; electric lighting;
cost \$3000; plans by F. Bonfoey, Charlotte.
(Recently noted.)

N. C., Raleigh.—Christ Episcopal Church
plans to erect Sunday-school room and par-
ish-house. Address The Rector, Christ Epis-
copal Church.

N. C., Raleigh.—Presbyterian congregation
plans to erect Sunday-school room. Address
The Pastor, Presbyterian Church.

S. C., Columbia.—Rev. Charles E. Woodson
is interested in erection of proposed Epis-
copal church in Shandon.

Tenn., Alberton.—Mazie's Chapel Baptist
Church, Rev. W. H. Runions, pastor, will
erect edifice.

Tex., Cameron.—Baptist Church will erect
addition to edifice; two stories; 70 feet wide;
cost \$8000. Address The Pastor, Baptist
Church.

Tex., Teague.—First Presbyterian Church
will expend \$7000 to erect edifice; 48x74 feet;
brick; hot-air heat; electric lighting; plans
by James McIntosh, Marfa, Tex.; day labor.
(Recently noted.)

Tex., Yoakum.—Catholic congregation is
receiving bids to erect edifice; Rev. J. Shee-
han, pastor.

Va., Big Stone Gap.—Colored Presbyterian
Church will open bids December 1 to rebuild
edifice; 45x30 feet; brick; furnace heating;
electric lighting; cost \$3500; plans by R. H.
Brown. Address proposals to Alexander
Clark. (Recently reported burned.)

W. Va., Bluefield.—Lutheran Church, Rev.
C. R. W. Kegley, pastor, will erect church
and parsonage.

W. Va., Charleston.—United Brethren
Church will have plans ready in January for
edifice; H. Rus Warne of Charleston is pre-
paring plans. (Recently noted.)

W. Va., West Union.—Christian Church
will receive bids through Joseph Freeman
until 2 P. M. October 28 to erect edifice; sepa-
rate bids for basement, brick work and
wood work; plans and specifications at office
of West Union Lumber Co. and at residence
of Mr. Freeman.

W. Va., Wheeling.—Catholic Syrian Church,
Rev. Paul Abrams, pastor, plans to erect
edifice.

CITY AND COUNTY

D. C., Washington.—Stable.—District Com-
missioners opened bids to erect stable for
street cleaning department; contract will
probably be let to Davis Construction Co.,
Union Trust Bldg., Washington.

Fla., St. Petersburg.—Jail.—City will ex-
pend \$4000 to erect jail; 40x100 feet; brick
construction; plans by R. E. Sykes day
labor. (Recently noted to reject all bids.)

Ga., Augusta.—Stables.—Streets and drains
committee will soon award contracts to
erect three brick buildings at site of new
city stables for feed room, blacksmith shop

and stable; Nisbet Wingfield, City Engineer
and Commissioner of Public Works.

Ga., Quitman.—Fire Department.—City will
vote on \$12,000 bond issue for Fire Depart-
ment improvements. Address The Mayor.

La., Houma.—Market.—City, Calvin War-
low, Mayor, will advertise for bids to erect
proposed market.

Md., Cumberland.—Market.—City is plan-
ning to erect proposed central Market; Dr.
Thomas W. Koon, Commissioner of Fire and
Police.

Mo., Kansas City.—Comfort Station.—Board
of Public Works is having estimate made by
Louis Ash, City Engineer, for cost of pro-
posed comfort station.

Mo., Leeds.—Hospital.—Hospital and Health
Board approved sketches by Wilder &
Wright, First National Bank Bldg., Kansas
City, Mo., for tuberculosis hospital.

Okl., Oklahoma City.—Mausoleum.—City
plans to erect mausoleum; exterior of gran-
ite; interior highly polished marble; art
glass windows protected by bronze grilles;
bronze doors and gates. Address The Mayor.

Okl., Oklahoma City.—Fire Station.—City
will erect fire station in Packingtown to cost
\$3000. Address The Mayor.

Okl., Pawhuska.—Osage county will vote
November 14 on \$100,000 bond issue for court-
house and jail; W. J. Boone, County Clerk.
(Recently noted.)

Tenn., Clifton.—Pavilions, etc.—City plans
to establish park along water front; 100x30
yards; will erect bandstand, pavilions, etc.

Tenn., Chattanooga.—Market.—City is con-
sidering sites for proposed market; S. B.
Wright, C. D. Mitchell, C. D. Huston and
others, committee.

Tenn., Nashville.—City Hospital.—City has
plans by Asmus & Norton, Nashville, for ad-
dition to city hospital; cost \$50,000; will
probably award contract to George Moore &
Sons, Nashville, for brick work and carpen-
tering, and to W. H. Peebles, Nashville, for
foundation. (Previously noted.)

Tex., Brownsville.—Jail, etc.—Cameron
county will erect jail and courthouse for
which \$230,000 bond issue was recently re-
ported voted; John Bartlett, County Judge.
(See "Courthouses.")

Tex., Oak Cliff, Station A, Dallas.—Library.
Oak Cliff Branch Library Association has
plans by S. M. McMurray for branch Car-
negie library. (Previously noted.)

Tex., Pecos.—Library.—Pecos Carnegie Li-
brary Committee is having plans prepared
by W. H. Kelley, Pecos, for Carnegie li-
brary. (Recently noted.)

COURTHOUSES

Ala., Mobile.—Road and Revenue Commis-
sioners of Mobile County have plans by
Hutchisson & Chester, Mobile, for improve-
ments to courthouse as follows: Painting,
erecting one jury-room, tile floors, storm
doors, ceilings in law and equity court, etc.

Okl., Duncan.—Stevens County Commis-
sioners will erect courthouse; three stories
and basement; fireproof and reinforced con-
struction; exterior walls of limestone; cop-
per and art glass dome; inner walls of mar-
ble and ornamental plaster; brass stair-
ways; cost about \$50,000. (Recently noted.)

Okl., Muskogee.—Muskogee county will
vote November 16 on \$300,000 bond issue to
erect courthouse. Address County Commis-
sioners. (Recently noted.)

Tex., Brownsville.—Cameron county will
erect courthouse and jail; fireproof con-
struction; cost \$150,000 to \$200,000; architect
not selected; will open bids after January
1; John Bartlett, County Judge. Bond issue
of \$230,000 recently noted voted.)

Tex., Dallas.—Dallas County Commis-
sioners will remodel building used by justices
of the peace for Precinct No. 1; will con-
vert ground floor into two rooms for justices
of the peace and top floor divided into rooms
for Grand Jury and for sleeping quarters
for petit jurors.

DWELLINGS

Ala., Mann City (not a postoffice).—Thomas
P. Littlepage, Union Trust Bldg., Washing-
ton, D. C., and associates will erect dwel-
lings, outhouses, etc. (See "Land Develop-
ments.")

Ala., Montgomery.—N. J. Bell will erect
residence; one story; brick; cost \$8993.

Ala., Attalla.—George Hazel, R. F. D. No.
1, will erect residence.

Ala., Wetumpka.—W. E. Lacy will erect
residence; two stories.

Ark., Little Rock.—Dr. C. M. Hawkins will
erect residence; cost \$6000.

D. C., Washington.—William E. Blundon,

2117 1st St. N. W., has plans by M. Vaughn,
Woodridge, D. C., for seven dwellings at 55
to 67 W St. N. W.; two stories; brick; cost
\$30,000.

D. C., Washington.—C. W. King, Jr., 930
New York Ave. N. W., has plans by N. H.
Grimm, 627 F St. N. W., Washington, for five
dwellings at 1884 to 1892 Ontario Pl. N. W.;
two stories; brick; cost \$20,000.

D. C., Washington.—Edward F. Pickford,
422 8th St. S. E., will erect residence at Con-
necticut Ave. and Woodley La., Woodley
Park; three stories.

D. C., Washington.—H. B. Howenstein
Company has plans by E. Hauser, 37 New
York Ave. N. E., Washington, for dwelling;
17x35 feet; ordinary construction; cost \$3900;
construction by owners. (Recently noted.)

Fla., Jacksonville.—Harriett B. Bishbee will
erect residence; three stories; brick.

Fla., St. Augustine.—Mrs. Eunice A. R.
Greator will erect cottage.

Fla., St. Augustine.—John B. Floyd will
erect residence; three stories; cost several
thousand dollars.

Fla., St. Augustine.—James Flynn of Cleve-
land, O., will erect residence to cost several
thousand dollars.

Ga., Atlanta.—Samuel T. Weyman, 827
Equitable Bldg., has plans by Arthur N. Can-
ton for two dwellings; two stories; eight
rooms; frame; ordinary construction; fur-
nace heat; cost \$4000 each; day labor.

Ga., Atlanta.—W. H. Allen has plans by
H. C. Dozier, Atlanta, for dwelling; 10
rooms; ordinary construction; stucco; heat-
ing not decided; electric wiring; cost \$7500;
day labor. (Recently noted.)

La., New Orleans.—Gus Mattle will erect
cottage; cost \$4000.

La., New Orleans.—Horace Pitcher will
erect residence; cost \$3000.

La., New Orleans.—A. Duplantier will erect
residence; two stories; cost \$4200.

Md., Baltimore.—Murray & Haines, 1700 N.
Ellamont St., will erect three dwellings;
two and a half stories; frame; 28x33 feet;
cost about \$3000 each; plans by M. H. Mur-
ray, 1700 N. Ellamont St., Baltimore.

Md., Baltimore.—Villa Nova Company, R.
W. Cook, secretary, 12 E. Lexington St., will
erect number of bungalows; stone construc-
tion; slate roof; eight rooms; two baths.

Md., Timonium.—Fairfax Landstreet, Stev-
enson, Md., will erect residence; stone con-
struction.

Mo., Clayton.—Mrs. A. A. Wallace will
erect residence in University City, St. Louis
county; 12 rooms; two stories; cost \$20,000.

Mo., Clayton.—J. Lionberger Davis will
erect 15-room dwelling in Brentmoor Park;
two stories; cost \$35,000.

Mo., Kansas City.—Home Land & Building
Co. will expend \$2500 each to erect four
dwellings; seven rooms; ordinary construc-
tion; furnace; construction by owners. (Re-
cently noted.)

Mo., Kansas City.—A. J. King Realty Co.
will erect nine dwellings, ranging in size
from 26x50 feet to 30x42 feet; brick, stucco
and stone; furnace and hot-water heat; av-
erage cost \$4000; day labor. (Recently
noted.)

Mo., Kansas City.—Monroe F. Cockrell of
Traders' National Bank will open bids to
erect two-story brick and stucco residence;
cost \$4000. (Recently noted.)

Mo., Kansas City.—C. L. Bliss has plans by
E. O. Brostrom, 209 Reliance Bldg., Kansas
City, for dwelling; 42x28 feet and 22x26 feet;
brick veneer; ordinary construction; frame
and stucco; furnaces; gas and electric light-
ing; cost \$6000 and \$2500, respectively; con-
struction by owner. (Recently noted.)

Mo., Kansas City.—Wells Bros. will erect
frame dwelling; cost \$8000.

Mo., Kansas City.—A. C. Black will erect
three frame dwellings; cost \$5400.

Mo., Kansas City.—N. W. Dible, 2645 E.
28th St., will erect 250 dwellings to extend
from Prospect to Agnes Sts. between 41st
and 43d St.; some bungalow type; cost \$4000
to \$6000 each.

Mo., Kansas City.—Homer L. Donaldson
will erect residence; stone veneer; cost \$4500.

Mo., Kansas City.—W. H. Klissett will erect
dwelling; frame; cost \$3000.

Mo., Independence.—W. C. Rice will erect
residence.

N. C., Asheville.—Mrs. M. H. Harris will
erect 12-room residence on College St.; cost
\$4500.

Okl., Oklahoma City.—L. G. Basham will
erect five eight-room residences.

Okl., Tulsa.—E. D. Smith will erect res-
idence; two stories; cost \$3000.

S. C., Chester.—J. T. Collins will expend

\$4000 to erect dwelling; nine rooms; two stories; frame; grates; electric lighting; architect not selected. (Recently noted.)

Tex., Brownwood.—J. C. Vincent, 1505 Vincent St., desires plans and specifications from architects for dwelling; six rooms; ordinary construction; electric lighting; cost \$3500; will receive bids in about 30 days. (Recently reported burned.)

Tex., El Paso.—E. P. May will erect bungalow; five rooms; brick; plastered with stucco; cost \$1100; construction begun.

Tex., El Paso.—J. C. Hansen has plans for residence; two stories; eight rooms; cost \$4500.

Tex., El Paso.—Perry-Kirkpatrick Realty Co. will erect six-room residence for Henry C. Kramp; cost \$3500.

Tex., Gause.—Baptist congregation will erect parsonage. Address The Pastor, Baptist Church.

Tex., Gause.—Methodist congregation will erect parsonage. Address The Pastor, Methodist Church.

Tex., Houston.—David Hannah acquired townsite of Belaire and will erect 30 or 40 dwellings; cost \$5000 to \$8000.

Tex., Houston.—H. S. Tschopik will erect residence; seven rooms; cost \$3000.

Tex., Houston.—A. G. Ruggles of Milwaukee, Wis., will erect residence; cost about \$10,000.

Tex., Houston.—Russell Brown Co. will erect four dwellings; six, seven and eight rooms; cost \$11,000.

Tex., Houston.—H. A. Kinney, president of Kinney Concrete Stone Co., will erect residence.

Tex., Kyle.—Tom Richmond will erect residence.

Va., Alexandria.—Alexandria Construction Co. will erect 10 dwellings on Washington St.; brick construction.

Va., Fredericksburg.—Samuel G. Wallace will open bids October 23 to remodel dwelling; 45x45 feet; two stories; hot-water heat; cost \$5000; plans by Philip N. Stern, Fredericksburg.

Va., Norfolk.—H. D. Johnson is reported to erect residence.

Va., Norfolk.—Dr. T. V. Williamson, Taylor Bldg., will expend \$7000 to erect dwelling; hot-water heat; gas and electric lighting; plans by Lee & Diehl, Seaboard Bank Bldg., Norfolk; bids opened October 9; R. M. Price of Norfolk is lowest bidder. (Recently noted.)

Va., Richmond.—W. S. Drewery has plans by G. J. Hunt for dwelling; two stories; seven rooms; ordinary construction; brick; grates and stoves; gas and electric lighting; cost \$3000; bids opened. (Recently noted.)

Va., Richmond.—Clem Bassett will erect residence; cost \$15,000.

W. Va., Bluefield.—Lutheran Church, Rev. C. R. W. Kegley, pastor, will erect church and parsonage.

GOVERNMENT AND STATE

D. C., Washington.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, opened bids to erect postoffice; John Gill & Son, Cleveland, O., are lowest bidders at \$2,187,000 and \$2,382,000, respectively, for Maine granite and Vermont white granite; plans by D. W. Burnham & Co., Chicago, Ill. (Previously noted.)

Fla., Tallahassee.—Court Building, etc.—State Building Commission will receive until 10 A. M. December 7, at Tallahassee, plans from architects for Supreme Court, Railroad Commission and library building; three stories and basement; 75x150 feet; cost \$85,000; description of building furnished upon application to A. C. Croom, secretary Building Commission.

Ga., Milledgeville.—Reformatory.—Prison Commission, Wiley Williams, commissioner, will enlarge reformatory to double capacity; will also provide building for negro girls.

Md., Annapolis.—Boiler-house.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. October 31, and opened immediately thereafter, for completing boiler-house at Naval Experiment Station. Applications for proposals should refer to Schedule 3365. Blank proposals furnished upon application to Navy Pay Office, Baltimore, Md., or to bureau; T. J. Cowie, Paymaster-General, U. S. N.

S. C., Columbia.—Hospital.—State Hospital Commission accepted plans by F. B. Ware, Albany, N. Y., for first of proposed buildings at State Park; two stories and basement; will accommodate 150 negro men; first group of six buildings brick; fireproof construction;

tion; E. T. Wells, Jr., engineer in charge; J. L. Ludlow, consulting engineer.

S. C., Columbia.—Penitentiary.—State will make improvements to State Penitentiary, including two stockades to accommodate 90 prisoners each and cost \$37,000; D. J. Griffith, superintendent.

S. C., Gaffney.—Postoffice.—Treasury Department is reported to receive bids not later than November 1 to erect postoffice; cost about \$50,000.

S. C., Union.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., is reported to open bids December 5 to erect proposed postoffice building.

Tex., Carlsbad.—Tuberculosis Colony.—Anti-Tuberculosis Commission, Dr. Ralph Steiner, chairman, Austin, Tex., has plans by Henry T. Phelps, San Antonio, Tex., for tuberculosis colony, including power and light plant. (Previously noted.)

Tex., Stamford.—Federal Building.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., purchased site for proposed \$100,000 Federal building.

HOTELS

D. C., Washington.—Arlington Hotel Co., George Howard, president, 15th and New York Ave., will erect proposed hotel to replace Arlington Hotel.

Fla., Worthington Springs.—Mr. Lamb will probably rebuild Worthington Hotel, reported burned; loss \$12,000 to \$15,000.

La., New Orleans.—Solar Estate contemplates erection of annex to Cosmopolitan Hotel; 12 stories.

Mo., Kansas City.—Walter Davis is reported to erect hotel; five stories; porches on every floor.

N. C., Wilmington.—Carolinas Cotton & Southern Industrial Agricultural Exposition Co. incorporated with \$250,000 by Russell Bellamy, Dr. J. J. Crow, Walter Kingsbury and others; plans to erect two hotels, etc.

Okla., Atoka.—D. H. Linebaugh is planning to erect 40-room hotel.

Okla., Oklahoma City.—Dr. and Mrs. J. D. Purdy have plans by G. B. Boon, Oklahoma City, for hotel at 4th St. and Harvey Ave.; five stories and basement; fireproof; pressed brick; stone trimmings; reinforced concrete construction; hall walls of tile, with marble wainscoting; roof garden; cost \$65,000.

S. C., Walterboro.—R. H. Wichman will receive bids until October 31 to erect bank, store and hotel building. (See "Bank and Offices.")

Tenn., Union City.—H. P. Horner is reported to erect hotel; three stories.

Tex., Dallas.—J. W. West of Valdosta, Ga., and R. L. Lucas will make improvements to Hotel Southland, including overhead system of electric elevators, installation of 250 H. P. gas engine and electric generator, new ice plant, pump, etc.; machinery contracts placed; work will be done under supervision of Dana H. Griffin, formerly of Fort Worth, Tex.

Tex., Port O'Connor.—B. F. Yoakum of St. Louis & San Francisco Railroad, 71 Broadway, New York, and associates are reported to erect hotel; cost about \$500,000. A dispatch to Manufacturers Record says: "E. H. Everett of New York and St. Louis, associated with Adolphus Busch; P. R. Austin of Port O'Connor, J. J. Welder of Victoria and C. S. E. Holland of Victoria are interested."

Tex., Yoakum.—Yoakum Hotel Co. incorporated with \$50,000 capital stock; will erect hotel; brick; three stories; 60 rooms; 100x140 feet.

Va., Petersburg.—F. K. Clements will, it is reported, erect hotel.

Va., Petersburg.—Frank Clements and others are reported as contemplating erection of hotel.

W. Va., Waverly.—Waverly Springs Hotel Co. will erect proposed hotel; also construct temporary bottling-house on hotel grounds.

MISCELLANEOUS

Ga., Atlanta.—Hospital.—Atlanta Hospital, 23 Cone St., will make improvements to building at 30 Crew St., previously acquired, and occupy for hospital; will erect colored ward in rear.

Ga., Norcross.—Shed.—Southern Oak Leather Co. erected small temporary shed to replace buildings reported burned at loss of \$5000.

Ky., Louisville.—Stable.—L. H. Hudson, president of Stockyards Bank, will erect lively stable; brick; 100x200 feet; cost \$5000.

Ky., Louisville.—Sanatorium.—Trustees of Association Sanatorium are having plans

prepared for addition to Hazelwood Sanatorium; frame; accommodations for 24 patients, each to have separate room; cost about \$15,000.

Md., Baltimore.—Restaurant.—George J. Krouse, 115 W. Fayette St., is having plans prepared by Emory & Nussear, 415 Professional Bldg., Baltimore, for improving and enlarging restaurant, including erection of addition in rear; brick and stone; cost about \$10,000.

Md., Baltimore.—Hospital.—Maryland Homeopathic Hospital opened bids for improvements to hospital at 1122 Mount St., including brick and stone front, electric elevator, erection of porticoes, new flooring, addition in rear, etc.; cost \$20,000. R. B. Mason, 210 E. Lexington St., Baltimore, is lowest bidder and will probably receive contract. (Recently noted.)

Md., Baltimore.—Restaurant.—Frank T. Kavanaugh is having plans prepared by F. E. Torrey, 802 Law Bldg., Baltimore, for restaurant building on North Ave. near Charles St.; pressed brick; stone and terra-cotta; beveled plate-glass front; cost \$10,000.

Md., Frederick.—Nurses' Home and Laundry.—Frederick City Hospital Association will erect nurses' home and laundry building; cost about \$6000.

N. C., Raleigh.—Christ Episcopal Church plans to erect parish-house and Sunday-school room. Address The Rector, Christ Episcopal Church.

S. C., Charleston.—Baker-Craig Sanitarium incorporated with \$50,000 capital stock; A. E. Baker, president; L. R. Craig, secretary-treasurer; will open bids about December 1 to erect sanitarium; three stories; 80x140 feet; fireproof construction; hot-water heat; gas and electric lighting; cost \$30,000; plans by E. V. Richards, Bennettsville, S. C., and J. D. Newcomer of Charleston. (Recently noted.)

S. C., Columbia.—School Exhibit.—Agricultural and Mechanical Society of South Carolina, J. A. Banks, president, will erect permanent building for Clemson College exhibits.

Tenn., Chattanooga.—Exhibit.—George Patten and others are promoting organization of company to conduct electrical exposition; plans to erect building to cost \$12,000 to \$15,000.

Tenn., Knoxville.—Library.—Trustees of Lawson-McGhee Library are planning to erect library building; Prof. J. D. Hoskins, chairman of committee.

Tenn., Nashville.—Clubhouse.—Hotel Hermitage Operating Co., C. A. Wood, president, plans to erect clubhouse for employees.

Tex., Cuero.—J. J. Fisher contemplates, it is reported, erection of stable; brick construction.

Tex., Palestine.—Hospital.—International & Great Northern Railway Co., O. H. Crittenden, consulting engineer, Palestine, will not erect hospital. (Recently noted.)

Tex., Weatherford.—Fair.—Parker County Fair, Norman H. Martin, secretary and manager, will erect exhibit building at Fort Worth and Walnut Sts.; 60x70 feet; tabernacle style; covered with corrugated iron; boxed walls.

RAILWAY STATIONS

Fla., Pensacola.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will erect passenger depot; fireproof construction; two-story main section, 206x100 feet; one-story section adjoining 60 feet long; loggia, 40x30 feet; main waiting-room, 43x60 feet; colored waiting-room, 24x44 feet; paved driveway 37 feet wide; train shed on north side of building; cost about \$125,000.

Ga., Vidalia.—Georgia & Florida Railway Co., W. A. Swallow, chief engineer, Augusta, Ga.; Seaboard Air Line and Macon, Dublin & Savannah railroads will receive bids through Architect G. Lloyd Preacher, Augusta, Ga., until noon November 10 to erect union passenger station; plans may be seen at office of Georgia & Florida Railway Co. at Vidalia or at office of architect, and additional sets may be secured from him by depositing certified check for \$25. (Previously noted.)

Mo., Springfield.—St. Louis & San Francisco Railway, F. G. Jonah, chief engineer, St. Louis, Mo., is reported as to erect \$500,000 depot.

Mo., St. Louis.—St. Louis Southwestern Railway, C. D. Purdon, chief engineer, Tyler, Tex., will erect freight depot at Main St. and Cass Ave.; five stories; two buildings; cost \$165,000, exclusive of equipment and furnishings.

Okla., Hobart.—St. Louis & San Francisco

Railway, F. G. Jonah, chief engineer, St. Louis, Mo., will, it is reported, erect depot.

Okla., Waurika.—Chicago, Rock Island & Pacific Railway, J. B. Berry, chief engineer, Chicago, Ill., plans to erect \$15,000 station; A. B. Warringer, engineer of maintenance, El Reno, Okla.

Tenn., Chattanooga.—Nashville, Chattanooga & St. Louis Railway, H. McDonald, chief engineer, Nashville, Tenn., will erect addition to depot.

Tenn., Johnson City.—Southern Railway, B. Herman, chief engineer, 1300 Pennsylvania Ave. N. W., contemplates erection of station.

Tex., Brenham.—Houston & Texas Central Railroad, I. A. Cottingham, chief engineer, M. W. and structures, Houston, Tex., will remodel main portion of union station, including erection of ticket office, converting present ticket office into ladies' waiting-room, etc.

Tex., Waco.—Missouri, Kansas & Texas Railway, S. B. Fisher, chief engineer, St. Louis, Mo., will, it is reported, erect freight depot.

SCHOOLS

Ala., Birmingham.—Sisterhood of Perpetual Adoration will erect convent; cost about \$50,000.

Ark., Heber Springs.—School Board is having plans prepared by B. R. Brown, Heber Springs, for high-school building; 70x112 feet; steam heat; date of opening bids not set.

D. C., Washington.—District Commissioners have plans by Snowdon Ashford, 1406 21st St. N. W., Washington, for colored manual-training school at Georgia Ave. and Howard Pl.; will open bids November 15; cost about \$20,000.

Fla., Marianna.—Trustees of State Reformatory School will erect two buildings—one for white girls, other for colored girls; cost \$5000 each.

Ga., Lagrange.—City will vote on \$25,000 bond issue for schools.

Ga., Quitman.—City will vote on \$6,000 bond issue to erect school. Address The Mayor.

La., Baton Rouge.—City will have plans prepared by Favrot & Livaudais, New Orleans, La., for improvements to Asia Street School; cost several thousand dollars.

La., Baton Rouge.—City contemplates issuing \$75,000 of bonds to erect school. Address The Mayor.

La., New Orleans.—Parents' Club of McDonough No. 12 School, J. D. Nix, president, is interested in erection of kindergarten and annex to primary grades.

La., Thibodaux.—Rev. A. M. Barbier, pastor of Catholic Church, plans to erect Catholic high school for boys.

Miss., Benton.—Pending financial arrangements plans will not be made until after November 6 or 7 to erect agricultural high school; W. W. Lockard, County Superintendent. (Recently noted.)

Miss., Magee.—Simpson County Agricultural High School Trustees plan to erect addition to dormitory; eight rooms.

Mo., St. Louis.—Croatian Roman Catholic Church of St. Joseph will erect school; two stories; cost \$3000. Address The Pastor, Croatian Roman Catholic Church of St. Joseph.

N. C., Salem, P. O. at Winston-Salem.—Town will vote December 26 on \$50,000 bond issue to erect and improve schools; F. A. Fogle, Mayor. (Previously noted.)

Okla., Davenport.—School Board has plans by F. E. Fagerquist, Oklahoma City, Okla., for school; two stories; eight rooms.

Okla., Guymon.—Guymon University will soon begin erection of first college building.

Okla., Oklahoma City.—School Board will erect additional ward school, to be known as Englewood school; cost about \$25,000.

Tex., Fort Worth.—School Board plans no erection of buildings at present. (Recently noted to have purchased site and to erect school.)

Tex., Rock Island.—City will soon resume work to complete school building cost \$15,000; J. F. McKnight, Hallettsville, Tex., is lowest bidder. (Contract previously noted awarded to Mr. McKnight.)

Tex., San Antonio.—School District No. 4 voted \$25,000 bond issue to purchase site and erect school. Address District School Trustees.

Va., Fredericksburg.—State Normal School Trustees plan to erect additional dormitories.

Va., Driver.—School Board of Sleepy Hole District, A. G. Darden, clerk, will receive bids until October 24 to erect school; certified check for \$100; plans and specifications

at office of Lee Britt, superintendent of schools, Suffolk, Va.

Va., Myrtle.—Chuchatuck chool District will expend \$3500 to erect school building; 30x75 feet; plans by J. L. Jones; bids opened October 14; G. E. Bunting, clerk, Suffolk, Va. (Recently noted.)

Va., Radford.—Board of Trustees of State Normal and Industrial School for White Women, G. E. Cassell, secretary, Richmond, Va., will receive plans and specifications until November 14 for buildings; cost \$150,000 to \$200,000; location and relative situation of administration building and dormitories to be indicated in plans; blue prints of site from Capt. W. T. Baldwin, president of board. (Recently noted to receive bids until above date.)

STORES

Ala., Birmingham.—J. G. Whitfield will erect store and apartment building at Ave. B and 20th St.; two stories; brick; four stores on first floor; apartments above; cost \$5,000.

Ala., Bessemer.—Sam Dunn will erect store building; two stories; pressed-brick front.

Ala., Bessemer.—Terry Bros. will erect two stores; brick; one story; 50x90 feet.

Ala., Jasper.—H. Cam Smith will erect store building; brick.

Ark., Little Rock.—Gus Blass & Co. are having plans prepared by George R. Mann, Little Rock, for department store; seven stories; fireproof; reinforced concrete, brick and terra-cotta exterior; 100x150 feet; cost \$50,000. (Previously noted.)

Ark., Little Rock.—George Muswick will erect store building; one story; brick; cost \$400.

Fla., Jacksonville.—F. S. Roberts will erect business building; three stories; brick; 60x75 feet.

Fla., Tampa.—Tampa Drug Co. contemplates erection of business building.

Ga., Atlanta.—Realty Trust Co., Candler Bldg., will make alterations and additions to business building at 61 N. Forsythe St.; cost \$9000.

Ga., Dalton.—John T. Holland will erect business building; two stories; cost \$15,000.

Ga., Savannah.—Collins Bros. Company will expend \$15,000 to remodel buildings as stores, offices and apartments; two stories, 21x120 feet; four stories, 31x60 feet; fireproof construction; gas heating; plans and construction by owners. (Recently noted.)

Ga., Dalton.—J. L. Holland will erect business building; 55x100 feet.

Ky., Bowling Green.—P. C. Jesse is having plans prepared for business building to replace burned McCormack Bldg. Annex; two stories; red pressed brick; 70x100 feet.

Mo., Kansas City.—G. R. Ferguson will erect store and apartment-house; brick; cost \$12,000.

Mo., St. Louis.—Rosewood Realty Co. will erect store building; one story; cost \$5000.

Mo., St. Louis.—Regal Shoe Co. will erect business building.

Mo., St. Louis.—Welfare Realty Co. will erect mercantile building; three stories; cost \$30,000.

N. C., Raleigh.—Raleigh Development Co. will erect store, apartment and theater building. (See "Theaters.")

S. C., Greenville.—W. W. Burgiss will erect four stores 20x80 feet; fireproof construction; no contract. (Recently noted.)

Tenn., Knoxville.—S. H. Kress & Co., 396 Broadway, New York, leased building at 421 Gay St. and will remodel.

Tex., Floresville.—A. J. Moore of San Antonio, Tex., general manager Eureka Telephone Co., will erect business building; two stories; brick; upper floor for telephone exchange; lower floor business purposes.

Tex., Houston.—Levy Bros. & Co. have plans by Mauran & Russell, Chemical Bldg., St. Louis, Mo., for dry goods store; 50x100 feet; mill construction; elevator; further details not available. (Recently noted.)

Tex., Sealey.—F. W. Bader will erect store building; brick; 30x90 feet; copper and plate-glass front.

Tex., Taylor.—Dr. R. H. Eanes has plans by Henry Struve, Taylor, for two business buildings; brick; one and two stories; 50x100 feet and 25x100 feet.

Tex., Yoakum.—John Tucker has plans by J. Henry Yentzen, Yoakum, for three one-story brick business buildings; bids opened October 20.

W. Va., Charleston.—Bradford Noyes, Jos. Ruffner and A. Alexander have plans by H. Ras Warner, Charleston, for store and apartment building; three stories; lower floor for stores; upper floors for apartments.

W. Va., Charleston.—Lewis, Hubbard & Co. will erect two store buildings; one story; brick.

W. Va., Piedmont.—S. G. Dixon Clothing Co. plans to remodel store building.

THEATERS

Ky., Pineville.—Commercial Club is promoting erection of opera-house; K. A. Whitaker, H. B. Jones, N. R. Patterson and others, committee.

Md., Baltimore.—Lyceum Theater & Amusement Co. incorporated with \$25,000 capital stock by H. Benge Simmons, A. Parosa Rasin and L. Bates Russell, all of Chestertown, Md.

N. C., Raleigh.—Raleigh Development Co. incorporated with \$50,000 capital stock by Henry E. Litchford, J. R. Rogers, R. W. Winston and F. K. Ellington; plans to erect store, apartment and theater building.

Va., Big Stone Gap.—J. R. Taylor has plans by J. M. Geary, Greensboro, N. C., for theater; 66x123 feet; fireproof construction; cost \$20,000. (Recently noted.)

WAREHOUSES

Fla., Pensacola.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will erect wharf and warehouse; cost about \$100,000. (See "Miscellaneous Construction.")

Ga., Augusta.—Howard H. Stafford, president Georgia-Carolina Brick Co., states that erection of warehouse (recently noted) depends upon organization of company which

will operate boats and barges on Savannah River. (See "Miscellaneous Enterprises.")

Ga., Dalton.—F. E. Shumate and Julian B. Oglesby have plans by Jack Head, Atlanta, for warehouse recently noted; 25x100 feet; mill construction; hydraulic elevator; cost \$4000. (See "Machinery Wanted.")

Md., Baltimore.—Callis & Callis, 2000 St. Paul St., are preparing plans for warehouse and storage building at 110 S. Register St. for Richard C. Wells; one story; slag roof; concrete foundation; 40x118 feet.

Mo., Brunswick.—City plans erection of warehouse for handling river freight; Louis Bencke may be addressed. (Kansas City Missouri River Navigation Co., Kansas City, Mo., recently noted to erect structure.)

Mo., St. Louis.—Walmer Building Co. will erect warehouse; two stories; cost \$9000.

Mo., St. Louis.—General Paper Stock Co. is considering erection of five-story warehouse.

Tenn., Chattanooga.—Special dispatch to Manufacturers Record says: "J. T. Lipton purchased tract in wholesale district for \$80,000; proposes to build warehouses or factories to suit tenants."

Tenn., Memphis.—W. T. Rawleigh Medical Co. of Freeport, Ill., will erect distributing house; brick, steel and concrete; fireproof; spur track; cost about \$75,000.

Tex., El Paso.—Goodman Produce Co. will not erect warehouse as recently reported.

Tex., Galveston.—Wells, Fargo & Co., New York, will not erect warehouse as recently reported.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Ala., Mobile.—Louis Forchheimer awarded contract to M. H. Roberts, Mobile, to erect apartment-house; 45x120 feet; two stories and basement; fireproof construction; hardwood interior finish; finishing hardware, mantels and grates, marble wainscoting, stairs and lighting fixtures to be awarded under separate contracts; contracts for heating awarded to L. J. Leahy, Mobile; electric wiring contract also awarded; cost of building, \$45,000; plans by Stone Bros., 201 Pollock Bldg., Mobile. (Recently noted.)

Okla., Oklahoma City.—Fire Station.—City awarded contract at \$8650 to J. A. McCall, Oklahoma City, to erect fire station at B St. and Harvey Ave., Capitol Hill. (Recently noted.)

Tex., Fort Worth.—Warehouse.—City awarded contract at \$12,984 to T. J. Clardy & Sons, Fort Worth, to erect warehouse. (See "Warehouses.")

W. Va., Wheeling.—City awarded contract at \$7974 to McDonald Bros. Contracting Co., Wheeling, to erect chemical engine-house; plans by Fred Faris, Wheeling. (Recently noted.)

Ala., Corey.—Tennessee Coal & Iron Co. awarded contract to Realty Construction Co., Birmingham, Ala., to erect 30 dwellings; frame; hot-air heat; electric lighting; cost \$1800 to \$3000 each; plans by William Leslie Welton, 1209 Empire Bldg., Birmingham. (Recently noted.)

Ala., Gadsden.—Charles L. Marsh awarded contract to J. M. Lloyd to erect two-story bungalow; 24x28 feet; frame; hot-air heat; electric lighting; cost \$9000. (Recently noted.)

Ark., Little Rock.—Horace Mitchell awarded contract to erect residence; cost about \$5000.

D. C., Washington.—George Mesline awarded contract to C. D. Volland, 1526 1st St. N. W., Washington, to erect four dwellings at 1502-1508 D St. S. E.; two stories; brick; cost \$8000; plans by E. O. Volland.

D. C., Washington.—W. H. Benner awarded contract to Page Construction Co., Hibbs Bldg., Washington, to remodel dwelling at 1800 Massachusetts Ave. N. W.; five stories; brick; cost \$4000; plans by J. H. deSilbour, Hibbs Bldg., Washington.

D. C., Washington.—Henry W. Kappler, 626 New York Ave. N. W., awarded contract to W. A. Kimmell, 1508 Columbia Rd. N. W., Washington, to erect dwelling at 628 New York Ave. N. W.; three stories; brick; cost \$4600; plans by J. H. Warner, 602 13th St. N. W., Washington.

D. C., Washington.—Mrs. May G. Callahan has plans by and awarded contract to W. E. Garber & Son, 623 M St. S. W., Washington, to erect dwelling at 1109-1111 Robinson St. N. W.; cost \$4200.

D. C., Washington.—D. F. Goff awarded contract to James H. Grant, 5049 Georgia Ave. N. W., Washington, to erect dwelling at 918 Madison St. N. W.; two stories; brick; cost \$4500.

D. C., Washington.—John H. Nolan, 1413 G

St. N. W., Washington, has contract to erect residence at Massachusetts Ave. and 42d St. N. W.; brick and tile; cost \$40,000; plans by Wood, Donn & Deming, 808 17th St. N. W., Washington.

Ga., Atlanta.—Walker Dunson, 400 Equitable Bldg., will expend \$3000 to erect dwelling; 36x58 feet; frame; ordinary construction; five rooms and bath; fireplaces; day labor. (Recently noted.)

Ga., Blackshear.—A. P. Brantley awarded contract to erect residence; Swiss type; will be equipped with own water-works, sewerage and lights.

Md., Baltimore.—John T. Donohue, 1808 Thames St., awarded contract to M. R. Stone, 2238 E. Hoffman St., Baltimore, to erect 26 dwellings on Ellwood Ave. between Lombard and Pratt Sts.; two stories; iron-spout brick construction; 13x45 feet; cost about \$35,000.

Md., Baltimore.—Richard P. Dorsey awarded contract to Roland Park Co., 408 Roland Ave., Roland Park, Md., to erect residence at Edgevale and Deep Deene Rds.; two and a half stories; ornamental frame; slate roof; concrete foundation; cost \$10,000; plans by E. L. Palmer, 408 Roland Ave., Roland Park, Maryland.

Md., Baltimore County.—Villa Nova Company, Richard W. Cook, secretary, 14 E. Lexington St., Baltimore, awarded contract to E. Wydeman, Woodlawn, Md., to erect dwelling; seven rooms, pantry and two baths; slate roof; shingles from second story; mill construction; stone; hot-water heat; electric lighting; cement sidewalks; cost \$4500.

Md., Rapsburg.—J. P. Anderson, Gardenville, Md., awarded contract to John W. Nelson, Rapsburg, to erect bungalow at Glenn and Ridge Aves.; six rooms; water-proof cement block construction; hot-water heat; cost \$3100.

N. C., Asheville.—J. C. Arbogast awarded contract to erect five eight-room dwellings; cost \$2600 each.

N. C., Lexington.—Theodore F. Kletz awarded contract to D. K. Cecil, Lexington, to erect three eight-room dwellings; brick; ordinary construction; electric lighting; cost \$13,500; plans by Hook & Rogers, Charlotte, N. C.

N. C., Winston-Salem.—George T. Brown awarded contract to G. E. Miller, Winston-Salem, to erect three dwellings; two stories; six rooms; frame covered with shingle; sewer and water connections; 21x18 feet each; grates; cost \$1800 each.

S. C., Greenville.—C. F. Haysworth awarded contract to Hendrix & Divver, Greenville, to erect residence; cost \$3000; plans by Joe T. Lawrence, Greenville.

Tex., El Paso.—F. N. Hall and A. J. Fullan awarded contract to Corning & Gray, El Paso, to erect eight dwellings; cost \$2000 each.

Tex., Lockhart.—John T. Story awarded contract to erect two-story brick dwelling.

Tex., Yoakum.—S. Kuykendall awarded contract to erect residence.

Govt., Cleburne.—Postoffice.—Government awarded contract to J. Bardon (recently noted as lowest bidder), Sulphur Springs, Tex., to erect postoffice; cost \$115,000.

W. Va., New Martinsville.—Lock-keeper's Houses.—Government awarded contract to Dayton & Francis (recently noted as lowest bidders), New Martinsville, to erect two lockkeeper's houses; 28x38 feet each; brick; hollow tile and stucco; mill construction; gas lighting; cost \$5900 each; cost of heating plant, \$200 each.

Ala., Mobile.—Stone Bros., architects, Mobile, and New Orleans, La., awarded contract to S. E. Dupree & Son, Mobile, to erect annex to Klosky's Hotel; ladies' cafe, 22x42 feet; cafe for men, 22x42 feet; dining-room, 45x70 feet; cost \$25,000; to be completed by February 1. (Recently noted.)

D. C., Washington.—Speedway Inn Co. awarded contract to Louis H. Emmert, 1119 15th St. N. W., Washington, to erect proposed bachelor hotel at 1703 New York Ave.; four stories; fireproof; cost \$40,000.

Fla., Leesburg.—J. A. McCormick has plans by Charles J. Phillips to remodel hotel and erect annex containing 16 rooms; mill construction; cost \$5000. (Recently noted.)

Ga., Macon.—Midland City Hotel Co., R. F. Burden, president, awarded contract at \$39,804 to C. L. Gray and W. L. Wimmer, St. Louis, Mo., to erect Dempsey Hotel; nine stories; granite, brick and terra-cotta; steel or concrete construction; W. L. Stoddard, architect, 30 W. 38th St., New York. (Recently noted.)

Fla., Jacksonville.—F. S. Roberts will erect business building; three stories; brick; 60x75 feet.

Fla., Tampa.—Tampa Drug Co. contemplates erection of business building.

Ga., Atlanta.—Realty Trust Co., Candler Bldg., will make alterations and additions to business building at 61 N. Forsythe St.; cost \$9000.

Ga., Dalton.—John T. Holland will erect business building; two stories; cost \$15,000.

Ga., Savannah.—Collins Bros. Company will expend \$15,000 to remodel buildings as stores, offices and apartments; two stories, 21x120 feet; four stories, 31x60 feet; fireproof construction; gas heating; plans and construction by owners. (Recently noted.)

Ga., Dalton.—J. L. Holland will erect business building; 55x100 feet.

Ky., Bowling Green.—P. C. Jesse is having plans prepared for business building to replace burned McCormack Bldg. Annex; two stories; red pressed brick; 70x100 feet.

Mo., Kansas City.—G. R. Ferguson will erect store and apartment-house; brick; cost \$12,000.

Mo., St. Louis.—Rosewood Realty Co. will erect store building; one story; cost \$5000.

Mo., St. Louis.—Regal Shoe Co. will erect business building.

Mo., St. Louis.—Welfare Realty Co. will erect mercantile building; three stories; cost \$30,000.

N. C., Raleigh.—Raleigh Development Co. will erect store, apartment and theater building. (See "Theaters.")

S. C., Greenville.—W. W. Burgiss will erect four stores 20x80 feet; fireproof construction; no contract. (Recently noted.)

Tenn., Knoxville.—S. H. Kress & Co., 396 Broadway, New York, leased building at 421 Gay St. and will remodel.

Tex., Floresville.—A. J. Moore of San Antonio, Tex., general manager Eureka Telephone Co., will erect business building; two stories; brick; upper floor for telephone exchange; lower floor business purposes.

Tex., Houston.—Levy Bros. & Co. have plans by Mauran & Russell, Chemical Bldg., St. Louis, Mo., for dry goods store; 50x100 feet; mill construction; elevator; further details not available. (Recently noted.)

Tex., Sealey.—F. W. Bader will erect store building; brick; 30x90 feet; copper and plate-glass front.

Tex., Taylor.—Dr. R. H. Eanes has plans by Henry Struve, Taylor, for two business buildings; brick; one and two stories; 50x100 feet and 25x100 feet.

Tex., Yoakum.—John Tucker has plans by J. Henry Yentzen, Yoakum, for three one-story brick business buildings; bids opened October 20.

W. Va., Charleston.—Bradford Noyes, Jos. Ruffner and A. Alexander have plans by H. Ras Warner, Charleston, for store and apartment building; three stories; lower floor for stores; upper floors for apartments.

N. C., Asheville.—Roger Lamson, Jr., has plans by and awarded contract to E. T. Rhinehardt, Asheville, to remodel hotel; steam heat; electric lighting; cost \$4500. (Recently noted under "Dwellings.")

Tex., Bryan.—J. T. Maloney awarded contract to Gordon, Jones & Co., San Antonio, Tex., to erect Exchange Hotel; four stories and basement; vacuum steam heat; cost \$60,000 to \$75,000; plans by Alfred Giles Company, San Antonio, Tex. (Previously noted.)

Tex., Bogata.—Sam Patterson of Patterson & Harvey awarded contract to O. B. Griffin, Bogata, to erect hotel building; brick; cost \$10,000.

MISCELLANEOUS

D. C., Washington.—Columbia Cafe Co. awarded contract to Burgess & Parsons, 612 13th St. N. W., Washington, to erect extension to cafe; present heating plant to be extended; ceiling illumination; bar lock lights; cost \$10,000; plans by Oscar G. Vogt, 405 Corcoran Bldg., Washington.

Mo., St. Louis.—Laboratory.—Walmer Building Co. awarded contract to James Black Construction Co. to erect laboratory for J. S. Merrell Drug Co.; two stories and basement; 43x57 feet; ordinary construction; steam heat; electric lighting; cost \$10,000. (Recently noted under "Warehouses.")

N. C., Tryon.—Stable.—Mr. Wilkins of Spartanburg, S. C., awarded contract to W. J. Gaines, Tryon, to erect stable.

Tenn., Knoxville.—Cafe.—W. S. Brownlow will expend \$6000 to remodel building; ordinary construction; steam heat; electric lighting; concrete sidewalks; plans by L. C. Waters, Knoxville; contract recently noted awarded to David Getaz, Son & Co., Knoxville.

W. Va., Clarksburg.—Sheds.—Baltimore & Ohio Railroad Co., M. A. Long, architect, Baltimore and Charles Sts., Baltimore, Md., awarded contract to Pittsburg Construction Co., Diamond Bank Bldg., Pittsburg, Pa., to erect umbrella sheds and porte cochere; cost about \$15,000.

RAILWAY STATIONS

Va., Altavista.—Virginia Railway, H. Fernstrom, chief engineer, Norfolk, Va., awarded contract to W. B. English, Altavista, to erect combination passenger and freight station; cost \$5000.

SCHOOLS

Fla., Inverness.—Board of Public Instruction awarded contract to Winston Bros., Inverness, to erect proposed school building; brick and wood; cost \$13,000.

Mo., Kansas City.—City will erect school building; 86x68 feet; ordinary construction; heating and lighting contracts will be let by Mr. Brady, chief engineer of Board of Education; plans by C. A. Smith, Kansas City; contract recently noted awarded to Flannagan Bros. Manufacturing Co., First and Michigan Aves., Kansas City, at \$33,750.

Mo., Kansas City.—Rockhurst College, Rev. J. P. Dowling, president, awarded contracts to erect college building as follows: Stone work to Thomas Marnell, Kansas City; reinforced concrete work to Martin Carroll, Kansas City; date for awarding other contracts not decided. (Previously noted.)

S. C., Columbia.—Agricultural and Mechanical Society of South Carolina, J. A. Banks, president, will erect permanent exhibit building at State fair grounds; 400x167 feet; steel construction; cost \$25,000; contract awarded to Mr. Taylor of Columbia.

S. C., Spartanburg.—Wofford College awarded contract to J. J. Keller & Co., Rock Hill, S. C., to erect dormitory building to be known as Carlisle Memorial Hall; cost over \$50,000. (Recently noted.)

Tex., Dallas.—Sisters of St. Mary awarded contract to Hughes-O'Rourke Construction Co., Dallas, to erect school building; two stories; brick; cost \$30,000; plans by Lang & Wittich, Dallas.

Tex., Fort Worth.—City's high school building is nearing completion; fireproof construction; 72 rooms; cost \$207,000; plans by Waller & Fields, Fort Worth; Innis & Graham Construction Co. of Fort Worth is contractor. (Building previously described.)

Va., Salem.—School Board awarded contract at \$15,490 to Sears & Brown, Salem, to erect high school building. (Recently noted.)

STORES

Ga., Gainesville.—Mrs. J. T. Telford awarded contract to George Matthews, Gainesville, for brick work on two buildings on Main St.; to be erected by day labor; one 45x100 feet for garage for Joseph Morton of Toccoa,

Ga.; both structures to be one-story; brick; iron and plate-glass fronts.

Miss., Laurel.—Benham Bros. awarded contract to Stanley Craft, Ellaville, Miss., to erect three store buildings.

Mo., St. Louis.—Eugene A. & Harry Freund, 1560 S. Broadway, awarded contract to Henry Ratz, 4333 Taft Ave., St. Louis, to erect store and apartment building; 33x51 feet; ordinary construction; steam heat; cost \$5000; plans by William Wedemeyer. (Recently noted.)

N. C., Tryon.—Mr. Wilkins, Greenville, S. C., awarded contract to W. J. Gaines, Tryon, to erect store, bank and office building. (See "Bank and Offices.")

Tex., Bryan.—J. Allen Myers awarded contract to C. H. Winn, Houston, Tex., to erect business building; two stories; brick; 50x100 feet; fireproof.

Tex., Gonzales.—James Miller awarded contract to erect business building; brick.

Tex., Seguin.—Ferd Klein awarded contract to Hillis Moore, Seguin, to erect business building; brick and iron; 40x100 feet; two stories; annex 18x50 feet; also two additional stores; \$16,000.

W. Va., Charleston.—A. H. Boyd has plans by and awarded contract to J. W. Lane to erect business building. (Recently noted.)

THEATERS

Fla., Brooksville.—Varn & Petteway have plans by and awarded contract to R. L. Bra-

ney to erect theater; 45x100 feet; ordinary construction; brick; electric lighting; cost \$5000. (Contract was recently noted awarded to Varn & Petteway.)

Miss., Gulfport.—Gulfport Opera-House Co., J. E. Paoli, manager, awarded contract to Fheath & Gully to remodel building at Twenty-eighth Ave. and 13th St. as theater. (Recently noted.)

Tex., Waco.—Mrs. George D. Streeter, Box 1013, awarded contract to B. Cranford, Waco, to erect theater recently noted; 60x130 feet; 40 feet high; one story; brick and concrete; probably hot-water heat; cost \$12,600; plans by Sanguinetti & Staats, Fort Worth. (See "Machinery Wanted.")

WAREHOUSES

Tex., Fort Worth.—City awarded contract at \$12,384 to T. J. Clardy & Sons, Fort Worth, to erect warehouse; brick; 120x60 feet. (Noted in August.)

Md., Baltimore.—National Casket Co., Lombard St. and Jones Falls, awarded contract to Edward Watters & Co., 532 St. Paul St., Baltimore, to erect warehouse at Granby St. and Jones Falls; two stories; brick; stone trimmings; slag roof; concrete foundation; electric lights; steam heat.

N. C., Clinton.—L. A. Bethune, D. M. Patrick and G. A. Clute will erect warehouse; awarded contract to D. E. Clifton, Clinton.

RAILROAD CONSTRUCTION

RAILWAYS

Ark., Jonesboro.—A dispatch quotes Robert Clarke, owner of a plantation at Clarkton, Ark., as saying that a railroad will be built from Jonesboro, Ark., to Memphis, Tenn., via Wilson, passing near Clarkton. A later report intimates that the line is the Jonesboro, Lake City & Eastern, which will be extended. W. H. Smith is general manager at Jonesboro, Ark.

Ala., Mobile.—Capt. T. W. Nicol, chief engineer of the Dauphin Island Railway & Harbor Improvement Co., is reported saying that it will soon advertise for bids for the construction of a steam railroad from Mobile to Cedar Point.

Ala., Montgomery.—George W. Jones, attorney, is quoted as saying that the Louisville & Nashville Railroad Co. will build an extension of its yards in Montgomery between Davidson and Lafayette Sts. W. H. Courtenay is chief engineer at Louisville, Ky.

Ark., Jonesboro.—A dispatch says that construction of the proposed electric railway from Jonesboro to Nettleton is now assured and will begin in a few days. Preston Hatcher and others are interested.

Ark., Marlon.—Reported that the Frisco System will build a railroad from Marlon to Hulbert, Ark., about 10 miles. F. G. Jonah is chief engineer of construction at St. Louis, Mo.

Ark., Pine Bluff.—A dispatch says that President W. J. Miller of the Pine Bluff & Northern Railroad Co. proposes to build a line from Pine Bluff north to a connection with the Rock Island system.

Ark., Stuttgart.—It is announced that the Central Arkansas & Eastern Railway of the Cotton Belt system between England, Stuttgart and Gillett, 25 or 30 miles, is completed and will be put in service October 22.

D. C., Washington.—The Chevy-Chase-to-Great-Falls Land Co., capital \$1,500,000, will, it is reported, build an electric railway from Chevy Chase, a suburb of Washington, to the Great Falls of the Potomac, about 10 miles. Temporary officers: President, Robert E. L. Yellott; vice-president, Jasper W. Long, both of Chevy Chase; secretary and treasurer, Arthur R. Thompson, Washington. Subscriptions are reported made to \$500,000 bonds for the railroad.

D. C., Washington.—The Washington & Old Dominion Railway Co. has, according to a dispatch from Richmond, leased the Bluemont Branch of the Southern Railway running from Alexandria, Va., to Bluemont, Va., 39 miles, and will, it is understood, electrify it for use in connection with its proposed road from Washington to Winchester, W. Va., 60 miles, which will be altogether about 90 miles long. Charles M. Hendley, 1517 H St. N. W., Washington, is president. Connection must be made by July 1 next.

D. C., Washington.—The Washington, Spa Spring & Greta Railway Co. has been authorized to issue \$5000 of bonds, presumably for construction. I. H. Saunders, 1407 F St. N. W., Washington, D. C., may be able to give information.

Fla., Pensacola.—It is announced that the Louisville & Nashville Railroad will build a new switching yard of 44 tracks in connection with its new depot in Pensacola. W. H. Courtenay is chief engineer at Louisville, Ky.

Fla., Palm Beach.—According to a dispatch, application will be made to charter the Palm Beach, Okeechobee & Western Railway Co. to build an electric railway 140 miles long from Palm Beach west to Fort Myers. R. J. Martin, J. H. Cordero, W. W. Marquis and John Matthews of Kansas City, Mo., are said to be interested.

Fla., Tarpon Springs.—R. F. Bettis of Tampa, Fla., is reported to have made survey for a railroad projected from a point east of Tarpon Springs, connecting with the Tampa & Gulf Coast Railroad, to Fort Hickory, and it may be extended to Hudson and Brooksville. It is further reported that seven miles of grade are completed and some track laid. Weeks Bros., who are interested in turpentine and lumber, are said to be back of the plan.

Ga., Elberton.—Announcement is reported made that contract will be let for the Elberton & Eastern Railway from Elberton via Tignall to Washington, Ga., 30 miles, within a month. W. O. Jones of Elberton is president.

Ky., Frankfort.—A dispatch says that the Clinchfield Northern Railway Co., capital \$5000, has been chartered, the incorporators being J. C. Stone, E. S. Bolen, W. H. Smith and H. C. Morrison.

Ky., Hopkinsville.—Charles Van den Burgh, who has been securing right of way between Hopkinsville and Guthrie, Ky., about 25 miles, for the proposed line of the Kentucky-Tennessee Traction Co., according to a dispatch, says that a contract has been closed to place the bonds. It is further reported that Charles Russell and W. O. Myers of Chicago and Edward E. Walker of Cincinnati and New York have inspected the route, which will be via Pembroke and Trenton. The line may be extended to Clarksville, Tenn.

Ky., Paducah.—Official information is received that the American Traction & Power Co., Inc., of Wilmington, Del., has removed its main offices to Indianapolis, Ind., and will be located after November 1 in the Hume-Mansur Bldg. there. It is understood that this company will handle the financing and construction of the Kentucky Southwestern Electric Railway, Light & Power Co. of Paducah and other systems in Kentucky. H. C. Brubaker of Indianapolis is president; E. F. Wheaton of Paducah, Ky., is first vice-president in charge of subsidiary corporations; W. A. Calhoun, C.E. and M.E., of Buffalo, N. Y., second vice-president and consulting engineer; John Francis of Cedar Rapids, Iowa, third vice-president and manager of securities department; H. P. Dew of Blacksburg, S. C., treasurer, and G. E. Bruce of Indianapolis, secretary. Hawkins & Hawkins, of the latter city, are general counsel.

La., Genesee.—The Genesee Lumber Co. says that its railroad, referred to as the Genesee & Eastern, is not incorporated, and

that the connection with the Houston Lumber Co.'s road was only for the purpose of getting out some timber owned by the first-named company near the track of the other.

La., New Orleans.—The Louisiana Southern Railroad, which is now leased by the Frisco, will, it is reported, immediately begin construction of the contemplated extension from Pointe-a-la-Hache to Bohemia, La., all the new 75-pound rails for relaying the present track and building the extension having been received. F. G. Jonah is chief engineer of construction for the Frisco at St. Louis, Mo.

Mo., Columbia.—Incorporation papers are reported prepared for the Columbia & Northern Electric Railway Co. to build from Columbia to Jefferson City, and also to Mexico, Mo. It is further proposed to construct lines from Columbia to Moberly and from Hereford to Fulton, Mo. The incorporators include A. J. Estes, M. N. Estes and M. G. Quinn of Columbia, Mo.; E. M. Stevens of East St. Louis, Ill.; W. A. Vandiver, C. Porter Johnson and Julius Koch of St. Louis, Mo.

Mo., St. Louis.—Newman Erb is quoted as confirming reports that the Iowa Central Railway will be extended to St. Louis, about 150 miles. R. G. Kenly is chief engineer at Minneapolis, Minn.

N. C., Asheville.—Campbell & Dickey of the United States Spruce Co., Marion, Va., who have purchased a large tract of spruce timber near Black Mountain from S. Montgomery Smith of Asheville, F. A. Drewry and Marcus A. Foster of Massachusetts, will, says a special dispatch to the Manufacturers Record, build a narrow-gauge railway 16 miles long.

N. C., Charlotte.—Grading is reported nearing completion on the Piedmont & Northern Traction Co.'s line from Charlotte to Gastonia, about 25 miles, and the line will, it is said, be operated by the Christmas holidays. About 2½ miles of track are laid.

N. C., Durham.—A. L. Cornell of Albemarle, N. C., will, it is reported, make survey for the extension of the Durham & South Carolina Railroad from Bonsal to Rawls, about 12 miles, for which the John T. McKinney Construction Co. of Lynchburg, Va., has the construction contract. E. Williams of Lynchburg is president.

N. C., Greensboro.—Concerning the report that C. D. Benbow and others are interested in a plan to build a railroad from Greensboro to Norfolk, a letter to the Manufacturers Record says that this is the railroad plan mentioned some time ago for a road via Roxboro, Oxford and Henderson. Plans are not yet matured.

Okla., Tecumseh.—A letter says that the Rapid Transit Interurban Co. of Tecumseh, which proposes to build a railway to Sulphur, Okla., has retained Edgar M. Graham of Muskogee, Okla., as chief engineer.

Okla., Taloga.—Charles Wesley Musgrove, Taloga, Okla., general manager of the proposed Taloga, Putnam & Southern Railroad, writes that the line projected is from Chickasha to Woodward, Okla., about 150 miles, via Putnam and South, including a bridge over the Washita River, besides several smaller bridges. Route is through undulating country. Mr. Musgrove is the contractor, and his name heads the list of incorporators. The others are S. H. Whittenberg, president; Frank Waddell, first vice-president; F. M. Darby, second vice-president; Charles Miller, treasurer; J. E. Ruble, secretary; George W. Kouns, I. M. Willey, George Sowers, Nett Stidham, C. S. Dunn, Perry Skelton and Wm. Phelps.

Okla., Tulsa.—The Frisco system, says a dispatch, announces plans to build a yard of 21 tracks in West Tulsa with a capacity of 2000 cars. F. G. Jonah is chief engineer of construction at St. Louis, Mo.

Okla., Woodward.—The Santa Fe system, says a report, will build a branch from Woodward northwest via Beaver, Okla., to Liberal and Hugoton, Kans. C. F. W. Felt is chief engineer at Topeka, Kans.

S. C., McBee.—It is announced that the extension of the South Carolina Western Railway from Hartsville to Sumter will be via Lydia and Bishopville and will continue to a point two miles beyond Sumter. There will also be a line from Lydia to Timmonsville and a point two miles beyond there. W. B. Bonsal, Hamlet, N. C., is president.

Tenn., Nashville.—The Louisville & Nashville Railroad Co. is reported to have purchased a tract of land south of Nashville, 1½ miles long and 600 yards wide, which may be used for yards. W. H. Courtenay is chief engineer at Louisville, Ky.

Tex., Belton.—A dispatch says that contract is let for the first mile out of Belton on the "Middle Buster" railroad (Quannah, Seymour, Dublin & Rockport Railway), and

it is understood that grading is let on to Georgetown, Tex., about 30 miles. Several miles grade south of Belton are already done. L. E. Walker, Marshall, Tex., is president. Offices, 114 Austin National Bank Bldg., Austin, Tex.

Tex., Mission.—According to a dispatch, the San Benito & Rio Grande Interurban Railway Co. has closed a contract to build an extension to Mission and Monte Cristo, about 55 miles. Surveys are reported being made for another extension to coal fields in Zapata county, about 175 miles. Sam Robertson of San Benito, Tex., is president.

Tex., Temple.—Dr. S. F. George of Dayton, O., says a dispatch, has proposed to business men of Temple and Marlin, Tex., to build an interurban railway to connect the two places for a cash bonus of \$75,000. A meeting will consider the offer.

W. Va., Sistersville.—The Parkersburg & Ohio Valley Traction Co., says a dispatch, has completed five miles of line from Sistersville to Friendly, and will operate it immediately.

W. Va., Morgantown.—Tracklaying is reported begun on the extension of the Morgantown & Dunkard Valley Electric Railway

from Barker to Cassville, and it will be operated next month.

W. Va., Webster Springs.—John T. McGraw of Grafton, W. Va., president of the West Virginia Midland Railroad, operating out of Webster Springs, is reported to have filed notice of increase of capital from \$500,000 to \$1,000,000. It is not stated whether improvements or extensions are to be made. Wm. Harry is chief engineer at Webster Springs.

STREET RAILWAYS

N. C., Concord.—T. H. Vanderford of Salisbury, N. C., is reported making arrangements to extend the Concord Street Railway.

Tenn., Jonesboro.—A letter to the Manufacturers Record says that \$25,000 has been voted by Jonesboro towards building a street-car line, and it is desired to get in touch with capitalists about the proposition. H. C. Beauchamp can probably give information.

Tex., Houston.—The Houston Electric Co. is reported as announcing that it will build an extension through Montrose Addition about 1½ miles long. David Daly is manager.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Asbestos.—See "Roofing."

Bakery Equipment.—S. L. Nushbaum & Co., 60 Citizens' Bank Bldg., Norfolk, Va., wants catalogues, information and prices on complete equipment for bakery.

Belting.—See "Canning and Pickling Plant."

Boiler.—See "Water-works Equipment."

Boiler.—W. V. Moore, 613 H St. N. W., Washington, D. C., wants hot-water boiler for house heating.

Boilers.—Karnes & Sons Cement Tile Co., C. O. Karnes, president, Yazoo City, Miss., wants prices on 25 to 30-horse-power boilers, new or second-hand.

Boilers.—See "Canning and Pickling Plant."

Bottling Machinery.—J. Harrison Yates, Herndon, Va., wants catalogues, prices, etc., on bottling machinery, crates, supplies, etc.

Brass Beds.—Max Low, 1955 Seventh Ave., New York, wants to correspond with manufacturers of brass beds; view to representation in Argentine.

Brick.—J. H. Cook & Co., Savannah, Ga., want to correspond with manufacturers of paving brick.

Brick Machinery.—See "Tools and Machinery."

Bridge Construction.—Surry County Supervisors will receive bids until noon October 28 at Surry, Va., for construction of 54-foot steel truss over Blackwater River. Information and plans may be obtained from P. St. J. Wilson, State Highway Commissioner, Richmond, Va., or clerk of court at Surry.

Bridge Construction.—La Salle County Commissioners, Cotulla, Tex., will receive bids until October 19 for construction of steel highway bridge over Nueces River; 80-foot span; 16-foot roadway; reinforced concrete abutments; for plans and specifications apply to C. C. Thomas, County Judge, or W. H. Sylvester, engineer, Cotulla.

Bridge Construction.—Bids will be received at office of Lee County Clerk, Jonesville, Va., until 11 A. M. November 3 for construction of eight bridges; four structures over Powell's River near Jonesville, Dryden, Pennington Gap and Olinger, two over Straight Creek near Turner's, one over Wallace's Creek near Jonesville and one over Cane Creek near Pennington Gap; bids invited on steel bridges, on rubble masonry and on concrete masonry; plans on file with clerk of Lee county; also with County Engineer at Pennington Gap, Va.; certified check \$500; further information furnished by B. E. Rhodes, County Engineer, Pennington Gap, Va., on application; P. St. J. Wilson, State Highway Commissioner, Richmond, Va.

Bridge Construction.—Jefferson County Board of Revenue, Birmingham, Ala., will receive bids until noon October 23 for con-

struction of 40-foot bridge over branch on X Rd. from 19th St., Bessemer, to Birmingham Rd.; 20-foot bridge over branch on same road; 14-foot bridge over branch on O'Possum Valley Rd., near Jack Smith's place; 20-foot bridge over branch near junction of Bessemer and Birmingham Rd. at Dabb's place; 20-foot bridge over branch on North Bessemer and Birmingham Rd., near Walnut Grove; 20-foot bridge over branch on X Rd. from Flint Hill to Pleasant Hill; 20-foot bridge over branch on New Castle Rd. near New Castle; 20-foot bridge over branch on Jasper Rd., near Sayre; 10-foot R. C. bridge over branch on Brookside Rd., near Warner; 32-foot bridge over Five Mile Creek on X Rd. from East Lake to Pinson; bids to be accompanied by \$200 check. For further information see J. W. Gwin, County Engineer, Room 103 Courthouse, Birmingham, Ala.

Briquette Machinery, etc.—Arthur Holliday, care of American Consulate, Sydney, Australia, wants information on process and materials for making briquettes from sawdust; also catalogues and prices on machinery.

Broom Machinery and Materials.—M. P. Gobble, Box 367, Abingdon, Va., wants information and prices on second-hand broom machinery and materials for broom-making.

Building Materials, etc.—See "Catalogues, etc."

Building Materials.—Winston Bros., Inverness, Fla., want prices on two or more cars of cement and hard wall plaster, 58 squares of metal shingles and 70 squares of tin shingles.

Building Materials.—W. E. Ward, Pineapple, Ala., wants prices on limestone, window sills, Roman arches and belt courses, plaster, laths, plaster paris, paints, hard oil for school building at Monroeville, Ala.

Cable.—Winston Bros., Inverness, Fla., want prices on wire cable.

Canning and Pickling Plant.—American Pickle & Canning Co., P. H. Roberts, manager, Wiggins, Miss., wants equipment for canning and pickling plant, including sugar-cane syrup grinding and cooking outfit; canning machinery for vegetables and lye hominy; catsup machinery, including power fillers and corkers; pickling vats; mustard mills; pickle-sorting machine; high-pressure boiler; engine; electric motors; electric-lighting system; sugar-cane dump cars and carts; steam piping, fittings and belting.

Cars.—Jones Purchasing Agency, 507 Andrews Bldg., Minneapolis, Minn., wants standard-gauge steam motor car, 60 feet long, seating capacity 50 to 60; high-grade equipment.

Catalogues, etc.—J. E. Henry, care of Board of Education, Administration Bldg., Louisville, Ky., wants catalogues, samples, etc., of interest to architects and engineers.

Chain, Piping, etc.—Proposals received at office of General Purchasing Officer, Isth-

mian Canal Commission, Washington, D. C., until 10.30 A. M. October 28 for furnishing chain, iron and steel pipe, pipe fittings, iron washers, sheet zinc, packing, mop heads, paint brushes, sythes, coke and linen tags. Blanks and general information relating to this circular (No. 657) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point at, San Francisco; also from United States Engineer offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, and Chamber of Commerce and Board of Trade, Tacoma. F. C. Boggs, Major, Corps Engineers, U. S. A., General Purchasing Officer.

Concrete Mixer, etc.—Winston Bros., Inverness, Fla., want latest improved mortar mixer and concrete mixer.

Cork Insulation.—Smithville Ice Factory, John L. Hill, president, Smithville, Tex., wants prices on cork insulation for 25-ton ice plant.

Cotton Yarn, etc.—Crondiras & Costi, P. O. Box 1226, Alexandria, Egypt, want to correspond with manufacturers of cotton yarns and sewing cottons; view to representation.

Disposal Plant.—Board of Commissioners, J. J. McMahon, secretary, Mobile, Ala., wants information and prices on garbage disposal plant, type of machinery, etc.

Ditching Machinery.—Georgia Farm, Fruit & Pecan Co., George W. Deen, president, Waycross, Ga., wants prices on ditching machinery.

Drainage.—Ben M. Tinsley, County Clerk, Caruthersville, Mo., will receive bids until 9 P. M. November 20 for excavation of about 3,000,000 cubic yards for drainage canals; plans, profiles and specifications on file with clerk; B. O. Bennett, engineer.

Drilling.—Orion Gas & Oil Co., 604 Majestic Bldg., Oklahoma City, Okla., will open drilling proposals March 1.

Drilling Machinery.—Hood Oil & Gas Co. (H. H. Gambrell and others), Blaine, Ky., will open bids on machinery after November 15.

Electrical Equipment.—W. E. Ward, Pineapple, Ala., wants prices on electrical equipment for school building at Monteville, Ala.

Electric-Light Plant.—City of Cadiz, Ky., will sell 20-year water-power electric-light franchise October 23. For information address A. C. Burnett, secretary Commercial Club.

Electrical Machinery.—Bromide Oolite Stone Works, Bromide, Okla., wants 150-kilowatt alternating-current three-phase generator.

Electrical Machinery, etc.—Azalea Woodworking Co., Azalea, N. C., wants prices on 60-light dynamo and a Corliss engine.

Electrical Machinery.—Madison Light & Power Co., J. H. White, president, Marshall, N. C., wants wire, transformers, etc., for lighting and power.

Electrical Machinery.—See "Canning and Pickling Plant."

Elevator.—F. E. Shumate, Dalton, Ga., wants prices on hydraulic elevator.

Engine.—See "Electrical Machinery, etc."

Engine.—Gatesville Excelsior Co., Chas. F. Cole, president, Batesville, Ark., will purchase second-hand 100-horse-power Corliss engine.

Engines.—See "Canning and Pickling Plant."

Farming Machinery.—Georgia Farm, Fruit & Pecan Co., George W. Deen, president, Waycross, Ga., wants prices on farming machinery.

Filter.—See "Water-works Equipment."

Furniture.—Commissioners' Court, Bee county, Beeville, Tex., will receive bids until 2 P. M. October 30 for furniture for new courthouse; bidders to exhibit samples; certified check for 10 per cent; specifications obtainable from Stephenson & Heldenfels, architects, Beeville.

Gas Engines.—J. A. Watson, Dunn, N. C., wants addresses of dealers in second-hand gas engines, 10 or 12 horse-power.

Grading.—P. Q. Moore, Councilman of Streets and Wharves, Wilmington, N. C., will receive bids until noon October 24 for grading Brunswick St.; certified check 5 per cent of bid; proposal blanks, plan and profile may be had at office of F. F. Pillet, City Engineer.

Grading.—Duval County Commissioners,

Jacksonville, Fla., will receive bids until 10 A. M. October 27 for clearing, grubbing and grading Pensacola Rd. from point three miles west of present hard-surfaced road to and from Marietta; specifications furnished on application to Gail L. Barnard, County Engineer. Address bids to C. W. Ellis, chairman City Commissioners.

Grading.—Bids received at Benicks Valley, Greenbrier county, West Virginia, until 10 A. M. October 21 for grading Summerville Rd. from intersection of Mann Rd. to intersection of Camp Rd. at Gum Tree; bidders required to look over route, which is marked by center line of stakes; specifications made known on day of letting; usual rights reserved; John E. Dougher, County Road Engineer.

Grain, etc.—Potomac Valley Orchard Co., C. L. De Vore, manager, Pearre, P. O. Little Orleans, Md., wants prices on corn, oats and hay in carload lots.

Ground Bone.—Potomac Valley Orchard Co., C. L. De Vore, manager, Pearre, P. O. Little Orleans, Md., wants prices on ground raw bone.

Hardware.—Crondiras & Costi, P. O. Box 1226, Alexandria, Egypt, want to correspond with manufacturers of hardware; view to representation.

Hay.—See "Grain, etc."

Heating Plant.—Proposals, endorsed "Proposals for hot-water heating system," received at Bureau of Yards and Docks, Navy Department, Washington, until 11 A. M. November 11, and then opened, for furnishing and installing complete hot-water heating system in wireless station buildings at Arlington, Va. Plans and specifications can be obtained on application to bureau. R. C. Hollyday, Chief of Bureau.

Heating Plant.—Mrs. Geo. D. Streeter, Box 1013, Fort Worth, Tex., wants prices on hot-water heating plant.

Heating Plants.—See "Boiler."

Holsting Machinery.—Potomac Valley Orchard Co., C. L. De Vore, manager, Little Orleans, Md., wants prices on elevating machinery for removing ice from pond.

Ice Machinery.—W. C. Hunt, Alvin, Tex., wants to purchase (preferably in Kentucky or Tennessee) 10, 15 or 20-ton ice machine.

Ice Machinery.—See "Tools and Machinery."

Ice Machinery.—T. W. Smith, 5612 Woodland Ave., Cleveland, O., wants machinery for ice plant; will correspond with manufacturers.

Insulating Machinery.—Craig Bros., Spencer, Va., wants to correspond with manufacturers of insulator pin machinery.

Ironworking Machinery.—Barbour Buggy Co., South Boston, Va., wants addresses of dealers in second-hand ironworking machinery; wants 26-inch shaper, 20-inch lathe and 20-inch drill press.

Irrigation Canal.—Sealed proposals received by Medina Irrigation Co., 520 E. Houston St., San Antonio, Tex., until 3 P. M. October 30 (extended date) for building 12 or more contract sections of its west canal, located about 23 miles west of San Antonio; aggregate length, approximately 28 miles; canals to have bottom widths of 20 feet in level ground, 15 feet in side-hill work, 10 feet in concrete-lined channels, and will include approximately 1,400,000 cubic yards of classified excavation material, two reinforced concrete siphons, concrete culverts, flume approaches and bridge crossings; contract sections approximately equal; bidders required to qualify as to past performance and ability to furnish adequate plant; certified check for 5 per cent of amount bid; rights reserved. Bidders are expected to go over ground, examine test pits and see local conditions. Further information, blank forms for proposals and detailed plans and specifications may be obtained from company at above address and at its New York office, twentieth floor, 25 Broad St., New York.

Lathe.—Roy Rinehart, Anna, Ill., wants information and prices on 28 or 36-inch lathe.

Lavatories, etc.—Proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. October 27, and then opened, for furnishing lavatories, water-closets, pipe fittings, valves, saws, files, buckets, belt lacing, sash cord, emery cloth, linoleum, twine, railway flags, blotting paper, red lead, asphaltum varnish, muriatic acid, lye, creosoted switch ties, etc. Blanks and general information relating to this circular (No. 654) may be obtained from the office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engineer offices in

Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, and Chamber of Commerce and Board of Trade, Tacoma. F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Lightning Rods.—Bert Snyder, Box 319, Brownsville, Tex., wants to correspond with manufacturers of lightning rods and ornaments.

Lumber.—See "Naval Supplies."

Lumber Plant Equipment.—Andrews Lumber Co., E. M. Campbell, president, Andrews, N. C., will open bids December 1 for machinery for lumber plant.

Lumber.—Sealed proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. November 10, then opened in public, for furnishing lumber. Blanks and general information relating to this circular (No. 655) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engineer offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash. F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Machine Tools.—J. A. Watson, Dunn, N. C., wants addresses of dealers in second-hand machinery for toolroom, including lathe, 18 or 20-inch swing, planer and drill press.

Marble-mill Equipment.—New South Marble Quarrying Co., Atlanta, Ga., wants bids on equipment for marble mill.

Metals.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until November 14 for furnishing 3400 pounds of rod bronze, schedule 4037; 5100 pounds of bulb angle steel, schedule 4036; 22,400 pounds ingot tin, schedule 4039; delivery Navy-yard, Norfolk, Va.; 5700 pounds of galvanized plate steel, schedule 4036; delivery Norfolk, Va., and Charleston, S. C.; also until November 14 for furnishing 2900 pounds of sheathing copper, schedule 4037; delivery Charleston, S. C.; for copies of schedules, apply navy pay office nearest navy-yard.

Metal Rod.—H. L. Roth, 3515 Haverford Ave., Philadelphia, Pa., wants rod 15 inches long by 5/8 inch diameter, with screw groove of about 45 per cent. running lengthwise on rod.

Metal Shingles.—J. Harrison Yates, Herndon, Va., wants prices on metal shingles.

Milling Machinery.—Isaac Eggers, Darkridge, N. C., wants prices on buckwheat flour-mill machinery.

Mixer.—Winston Bros., Inverness, Fla., want prices on small concrete mixer and mortar maker.

Naval Supplies.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until November 7 for furnishing 1000 pounds of black bristles, schedule 4020; delivery Navy-yard, Washington, D. C.; also until November 7 miscellaneas lot of magnesite pipe covering, 6000 feet of 5/8-inch air hose, 300 pounds of hydraulic leather, 350 square feet of leather lacing, schedule 4024; 1500 feet of mahogany, 12,000 feet of oak timber, 10,000 feet of white pine and 50,000 feet of yellow pine, schedule 4022; delivery Navy-yard, Norfolk, Va.; for copies of schedules apply navy pay office nearest navy-yard.

Naval Supplies.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. October 31, and opened immediately thereafter, to furnish at Navy-yard, Norfolk, Va., naval supplies as follows: Schedule 4005, machine tools; schedule 4009, murelatic acid; schedule 4010, spruce poles, sheet zinc, solder, hooks and thimbles, hose; schedule 4011, rubber packing. Applications for proposals should designate schedules desired by number. Blank proposals furnished upon application to navy pay office, Norfolk, Va., or to bureau. T. J. Cowie, Paymaster-General, U. S. N.

Naval Supplies.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. October 31, and opened immediately thereafter, to furnish at Navy-yard, Washington,

D. C., etc., naval supplies as follows: Schedule 4003, drill presses; schedule 4007, lumber and mill work; schedule 4008, cold-drawn steel. Applications for proposals should designate schedules desired by number. Blank proposals furnished upon application to bureau. T. J. Cowie, Paymaster-General, U. S. N.

Nitrate of Soda.—Potomac Valley Orchard Co., C. L. De Vore, manager, Little Orleans, Md., wants prices on nitrate of soda.

Oil Heaters.—Max Low, 1985 Seventh Ave., New York, wants to correspond with manufacturers of portable (ornamental) oil heaters; view to representation in Argentine.

Oils.—See "Provisions, Canned Goods, etc."

Paper.—Croniras & Costi, P. O. Box 1226, Alexandria, Egypt, want to correspond with manufacturers of writing, printing and packing paper, and ordinary boxes; view to representation.

Paving.—O. J. Knox, Town Clerk, Pontotoc, Miss., will receive bids until noon October 20 for construction of concrete walks; specifications on application.

Paving.—William Parkin, secretary of district, City Hall, Little Rock, Ark., will receive bids until 11 A. M. October 19 for grading, guttering, curbing and building concrete sidewalks and crossings on 19th, 21st and 22d Sts., Marshall from Wright Ave. to 24th St.; also build parkway on Marshall St.; plans and specifications on file with City Engineer; certified check \$2500.

Paving.—J. V. Delametter, City Clerk, Bartlesville, Okla., will receive bids until 2:30 P. M. October 21 for grading, curbing, paving, installing catch-basins, making gas, sewer and water connections on Osage Ave. from 1st to 4th St., and Shawnee Ave. from 4th to 11th St.; width, 40 and 30 feet, respectively; brick paving; macadam base; certified check \$500.

Paving, etc.—Maury Nicholson, City Engineer, Birmingham, Ala., will receive bids until 10 A. M. October 17 for construction of certain grading, macadamizing, bituminous binder macadam paving, combined curb and gutter and sidewalk paving; also for construction of certain sanitary sewers. Specifications may be obtained and plans examined at office of City Engineer.

Paving.—P. Q. Moore, Councilman of Streets and Wharves, Wilmington, N. C., will receive bids until noon October 24 for construction of 1000 square yards sidewalks; certified check \$250. Specifications may be obtained at office of F. F. Pillet, City Engineer.

Paving.—Duval County Commissioners, Jacksonville, Fla., will receive bids until 10 A. M. October 20 for paving St. Johns Ave. and Lake Shore Drive from city limits to McGilbs Creek with asphalt macadam; also until 10 A. M. October 27 for paving Lincoln Ave. from Highway Ave. southerly along Lincoln Ave. and McDuff Ave. to end of present shell road, and until same date for paving Mayport Rd. from Atlantic Blvd. to city limits of Mayport; specifications furnished on application to Gail Barnard, County Engineer. Address bids to C. W. Ellis, chairman County Commissioners.

Peanut Machinery.—Gill Peanut Factory, N. B. Gill, proprietor, Ruston, La., wants information, prices, etc., on peanut shellers and recleaning machinery for peanut factory.

Perfumes.—See "Soap, etc."

Peanut Factory.—J. T. Perfater, Tallahassee, Fla., is interested in locating peanut factory at Tallahassee.

Provisions, Canned Goods, etc.—Croniras & Costi, P. O. Box 1226, Alexandria, Egypt, want to correspond with manufacturers of salted, smoked and preserved meat; lards; candles (stearic); canned goods and preserves; cocoanut, bleached and cottonseed oils; biscuits; view to representation.

Pumps.—See "Water-works Equipment."

Pumps.—See "Spraying Machinery, etc."

Rail.—Jones Purchasing Agency, 507 Andrus Bldg., Minneapolis, Minn., wants 10 miles of 56-pound rail for Oklahoma delivery; also 15 miles for Georgia delivery and three miles light tram rail for Mexico.

Road Construction.—Rankin County Highway Commission, Mississippi, will receive bids November 6 to construct 60 miles of roads. Address J. A. Hammock, engineer, Brandon, Miss.

Road Construction.—Marion County Commissioners, Hamilton, Ala., will receive bids until noon November 15 for grading, draining and surfacing with gravel about 2 1/2 miles of State-aid road; also at same time for continuing road 11 miles farther; W. S. Keller, State Highway Engineer, Montgomery, Ala.

Road Machinery.—Humphreys County

Commission, James F. Fowkes, chairman, Waverly, Tenn., will want road roller for work on Memphis-to-Bristol highway.

Roofing.—J. Harrison Yates, Herndon, Va., wants prices on asbestos roofing and roofing slate.

Roofing, etc.—A. G. Lordley, Olympia, Ga., wants prices on steel sheet roofing and siding for building.

Roofing.—Morristown Normal and Industrial College, J. S. Hill, president, Morristown, Tenn., is ready to receive bids on 35 squares of slate and tin roofing and down spouts of galvanized iron for school building.

Safe, etc.—G. W. Marrow, Bank of Townsville, Townsville, N. C., wants prices on safe and bank fixtures.

Screen.—Milby & Dow Coal & Mining Co., Dow, Okla., will open bids November 15 on three-track shaker screen for slack, nut and lump coal.

Sewer Construction.—Commissioners of Sewerage, P. L. Atherton, chairman, Louisville, Ky., will receive bids until noon October 20 for construction of 23d and Dumesnil St. sewer, contract No. 85; plans and specifications on file with Commissioners of Sewerage, 603-607 Equitable Bldg.

Sewers.—See "Water-works and Sewers."

Sewage-disposal System.—A. J. Kenard, 128 Campbell Ave., Roanoke, Va., wants information, etc., on sewage-disposal system for basement restaurant, floor of which is five feet below city sewer.

Sewer Construction.—See "Paving, etc."

Slate.—See "Roofing."

Soaps, etc.—Croniras & Costi, P. O. Box 1226, Alexandria, Egypt, want to correspond with manufacturers of laundry soap, perfumed toilet soap and perfumes; view to representation.

Street-washing Machines.—Baltimore (Md.) Board of Awards will receive bids until October 25 for furnishing Department of Street Cleaning with three kindling squeegee street-washing machines; certified check \$500. Specifications may be obtained from Commissioner of Street Cleaning, William A. Larkins.

Skylights.—Morristown Normal and Industrial College, J. S. Hill, president, Morristown, Tenn., is ready to receive bids on three skylights for school building.

Signal Sets.—Baltimore (Md.) Board of Awards will receive bids until 11 A. M. October 25 for furnishing Fire Department with 60 signal sets for high-pressure service; specifications furnished upon application to P. W. Wilkinson, secretary Fire Department; certified check \$500.

Snubbing Post Parts, etc.—Proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. November 13, and then opened, for furnishing material parts for snubbing posts and springs, anchors, etc., for buffers on lock walls. Blanks and general information relating to this circular (No. 656) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from United States Engineer Offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, and Chamber of Commerce and Board of Trade, Tacoma. F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Spraying Machinery, etc.—Little Capon Orchards Co., C. C. Pierce, secretary, Kingwood, W. Va., wants prices on power spraying outfits; also on pump to raise water from stream about 250 feet to tank on hill; wants engine operating spraying pump arranged to pump water also.

Steel Products.—Max Low, 1985 Seventh Ave., New York, wants to correspond with manufacturers of steel products; view to representation in Argentine.

Stoneworking Machinery.—Bromide Oolitic Stone Works, Bromide, Okla., wants two second-hand stone planers.

Stone Crushing.—B. F. Pope, 703 Law Bldg., Baltimore, Md., wants party with crushing plant to crush stone by cubic yard.

Stump-pulling Machinery.—Georgia Farm, Fruit & Pecan Co., George W. Dean, president, Waycross, Ga., wants prices on stump-pulling machinery.

Telephone Equipment.—Office of Chief Signal Officer, Capt. R. J. Burt, disbursing officer, War Department, Washington, D. C., will receive bids until October 25 for furnishing large lot of storage batteries, switch-

board, base line switch boxes, cabinets, etc. Send for specifications.

Yarns.—See "Cotton Yarns, etc."

Syrup Machinery.—See "Canning and Pickling Plant."

Timber Sizer.—Central Lumber Co., Fulton and Hill Sts., Chattanooga, Tenn., wants timber sizer about 12x30.

Tools and Machinery.—Fr. Tanhaef, 37, Rue Du Peupin, Brussels, Belgium, wants to correspond with manufacturers of tools and machinery, including brickmaking machinery and ice machines and equipments; correspondence to be in English, German, Spanish or French. Send catalogues.

Twine.—Max Low, 1985 Seventh Ave., New York, wants to correspond with manufacturers of binder twine; view to representation in Argentine.

Ventilators.—Morristown Normal and Industrial College, J. S. Hill, president, Morristown, Tenn., is ready to receive bids on three ventilators for school building.

Water-works Equipment.—City of Weldon, N. C., will want pump of 1,000.00 and one of 1,500.00 gallons capacity, 50-horsepower boiler and filter of 500,000 gallons capacity. Address W. T. Shaw.

Water-works.—Board of Trustees, Braggs, Okla., will receive bids until 8 P. M. October 21 to construct water-works; plans and specifications at office of J. J. Johnson, clerk.

Water-works and Sewers.—Proposals for construction of water-works and sewer system for Amory, Miss., received by Mayor and Council until 4 P. M. November 7. Bidders must use proposal sheets furnished by town, and should address proposals to Eugene C. Dalrymple, City Clerk, and mark them "Proposals for furnishing material and constructing water-works and sewers." Plant will consist of elevated tank with maximum head of 150 feet, 100,000 gallons capacity; two 500-gallon-per-minute motor-driven pumps; one air-lift system; about five miles of mains, 4 to 10 inches in diameter; deep wells; 58 fire hydrants, valves and valve boxes. Sewer system will consist of about seven miles of sewers, 8, 10, 15, 18 inches in diameter; 58 manholes; 11 flush tanks; proposals received, first, for furnishing material and constructing water-works and sewer systems, complete, and second, for furnishing labor and constructing systems, town to furnish material for whole work or any subdivision, as shown by specifications; certified check for amount equal to 3 per cent. bid; plans and specifications at office of Mayor, Amory, Miss., and at offices of Solomon-Norcross Company, engineer, 1622-23 Candler Bldg., Atlanta, Ga.; J. A. Mayfield, Mayor; usual rights reserved.

Well Drilling.—J. Bert Foster, City Clerk, Chandler, Okla., will receive bids until 7 P. M. October 24 for drilling artesian well, according to specifications on file in his office; certified check \$500.

Wharf and Bulkhead.—United States Department of Agriculture, James Wilson, Secretary, Washington, D. C. Bids received until 2 P. M. October 24 to erect wooden wharf and bulkhead upon grounds of animal quarantine station, Sollers Point; further information and proposal forms may be obtained from disbursing officer, Department of Agriculture, Washington, D. C.

Wireless Masts.—Office of Chief Signal Officer, Capt. R. J. Burt, disbursing officer, War Department, Washington, D. C., will receive bids until October 20 for furnishing 25 40-foot wireless masts, sectional type "D," in accordance with specifications 551-A, 403-A, 416-B, 419-B, 96-B and drawings 857-4 and 106.

Woodworking Machinery.—J. E. Helams, Mobile, Ala., wants boring machines and shapers for cross-arm factory.

Fisher Hydraulic Stone Machinery.—A plant equipped with Fisher hydraulic stone machinery has been established at Rockford, Ill., where the machine is shown in operation. The Carrico Stone Co. of Rockford has adopted the Fisher hydraulic ramming system and is installing this machinery under the supervision of W. H. Fisher, president and general manager of the Fisher Hydraulic Stone & Machinery Co., 1109 Kilbourne Ave., that city. The Fisher hydraulic ramming machinery is used to produce a dense non-absorbent concrete block by ramming the aggregates together as one unit in a wet mixture, driving them together with a powerful blow under great pressure. Attachments for other products, such as the hollow block, with a one-piece wall, angular blocks for hollow walls, veneer blocks, slabs, water tables, cornices, window sills and caps, steps, dimension stone, etc., may be obtained with this equipment when ordered from the factory.

INDUSTRIAL NEWS OF INTEREST

Important Oklahoma Heating Contract.

The \$17,500 contract for the plumbing and heating work of the new courthouse at Coalgate, Okla., has been awarded to M. D. Michael of Durant, Okla.

Big Order for the Lynchburg Foundry Co.

The Lynchburg Foundry Co., Lynchburg, Va., has obtained the order for 5000 tons of pipe for the city of Muskegon, Mich. New bids will be asked in the spring on the remainder of the city's requirements, consisting of 2500 tons of 48-inch pipe.

Change in Virginia Iron Co.'s Officers

Mr. John B. Newton, formerly vice-president and general manager of the Virginia Iron, Coal & Coke Co. of Roanoke, Va., has been elected president of that company to succeed Henry K. McHarg, who has retired. Henry K. McHarg, Jr., has been elected vice-president and general manager to succeed Mr. Newton.

Wants to Invest \$10,000 With Manufacturing Company.

A position with a manufacturing concern is wanted as advertised in our columns by a graduate of Cornell University. He has had nine years' business experience and can invest \$10,000 after services have proven satisfactory. A mechanical line of work is preferred.

Robb Engineering Co.'s Boilers.

The American Agricultural Chemical Co. has ordered from the Robb Engineering Co., Ltd., South Framingham, Mass., two 60-inch, one 78-inch and two 72-inch horizontal return tube boilers, and two 48-inch vertical boilers and two stacks. These installations are for its various plants at Alexandria, Va.; Fort Pierce, Fla.; East Buffalo, N. Y., and Columbia, S. C.

Large Orders for Sugar Machinery.

The Bessemer Foundry & Machine Co., Bessemer, Ala., has recently shipped 12 carloads of heavy sugar-house machinery to New Orleans. Some of the individual castings weighed seven tons and were cast in one operation at the Bessemer plant. It is reported that the company has had a rush of business for several months and that a double force day and night has been working.

Terry Steam Turbine Co.'s Southern Agent.

J. S. Cothran of Charlotte, N. C., has been appointed sales agent of the Terry Steam Turbine Co. of Hartford, for North and South Carolina. His offices will continue to be located at Charlotte, N. C., where he has already established a large trade and has been extensively identified with the Southern trade.

Commercial Secretary Wants New Position.

A commercial secretary, now employed, who has had 10 years' railroad experience, including four years traveling, advertises in our Classified Opportunities columns that he desires to change his present position. He has had legal, newspaper and publicity experience and will furnish references as to his general standing and result-producing ability.

"Brownhoist" Branch Offices.

A branch office of the Brown Hoisting Machinery Co. of Cleveland has been opened in the Commercial National Bank Bldg., Chicago, under the management of A. M. Merryweather. An office has also been opened in the Monadnock Bldg., San Francisco, with J. P. Case as manager. The opening of these offices reflects the extensive use of "Brownhoist" machinery in all sections of the country.

The Texas Portland Cement Co.

An extensive exhibit has been established by the Texas Portland Cement Co. of Dallas at the Texas State Fair, which extends from October 14 to October 29 at Dallas. In this exhibit the various uses of cement concrete are shown both in full size and model construction, and a number of representatives of the Texas Portland Cement Co. are present to explain in detail the uses to which "Lone Star" cement can be applied.

McNally Cotton Gins for Egypt.

A number of cotton gins manufactured by the McNally Pneumatic Gin Corporation of Norfolk, Va., were recently shipped from Boston to the Lindermann cotton-ginning firm at Alexandria, Egypt, said to be the

most extensive ginner of cotton in that country. The machines were tested in Boston, and engineers from the McNally company will install them in Egypt for the purchaser. The Lindermann firm has also obtained the rights for selling this gin in Egypt.

"Dixie Royal" Cement Contract.

The contract for 8000 barrels of Dixie Royal cement, manufactured by the Dixie Portland Cement Co., Chattanooga, to be used in the construction of the Mississippi Normal College, was recently awarded to the Hawkins Hardware Co. of Hattiesburg, Miss. Other contracts in which Dixie Portland cement has been furnished recently include 8000 barrels in Americus, Ga., and 75,000 barrels in New Orleans for use in the construction of the Napoleon Ave. sewer.

The Corrugated Bar Co.'s New Headquarters.

The headquarters of the Corrugated Bar Co. will be changed October 14 from St. Louis to Buffalo, where they will occupy two floors of the Mutual Life Bldg. This change has been decided upon in order to bring their headquarters force to the vicinity of the warehouse and fabricating plants, which are located near Buffalo. District offices will be maintained in the National Bank of Commerce Bldg., St. Louis, and in New York and Chicago.

Triumph Electric Co.'s Recent Sales.

The Triumph Electric Co. of Cincinnati is doing a large and rapidly-increasing export business. A carload of equipment, including several large generators and motors, was recently shipped to Peking, China. Inquiries and orders have also been received from India, Cuba and New Zealand. The company has at the same time carried on a large volume of business in the United States, the sales reported in the past six months averaging more than 50 per cent. over the previous 10 years' monthly average.

Buffalo Forge Co.'s Drying Apparatus

The Buffalo Forge Co., Buffalo, is installing for the Columbia Shade Cloth Co. three sets of drying apparatus. One is being installed in their factory at Minetto, N. Y., and two in the factory at West Pullman, Ill. Each set consists of a 70-inch double-inlet "Conoidal" supply fan, a similar exhaust fan, and heaters capable of drying 24 yards of shade cloth per minute. The apparatus is to be used in connection with their Teuter machines.

Independent Pneumatic Tool Co.'s Atlanta Office.

A branch office has been established in the Candler Bldg., Atlanta, Ga., by the Independent Pneumatic Tool Co., Chicago, Ill., manufacturer of Thor air tools. This branch has been established in order that the company may be better prepared to take care of its rapidly increasing business in the South. The manager of this office is J. J. Keefe, who has been connected with the company for several years as Southern traveling representative. A complete line of Thor air tools and parts will be carried in stock.

Mosaic and Tile Contracts.

Among the recent contracts made by Dagostin & Angelini Bros., Montgomery, Ala., are the following: The tile, terrazo and marble work for the Knights of Pythias temple now under construction at Montgomery, in which this company's contract covers an aggregate of \$1500; the marble and cement floor for the addition to the Alabama State Capitol, amounting to \$4000; tile and cement work for the S. S. Foshee residence, Brewton, Ala.; \$1650; tile and marble work for the Citizens' Bank of Cairo, Ga., and tiles, terrazo and cement work for the Miller Hotel, Tampa, Fla.

"Cinmanco" Rewirable Fly Screens.

The Cincinnati Manufacturing Co., 1243 W. 6th St., Cincinnati, has recently taken over the Cincinnati Fly Screen Co., purchasing its factory, equipment and stock on hand, and will continue to operate the same as the Cincinnati Fly Screen Co. The manufacture of "Cinmanco" metal-frame rewirable wire screens will be added to the operations of the plant. This addition will give the Cincinnati Fly Screen Co. what is claimed to be one of the best lines of metal and wood fly screens made, with central location, excellent shipping facilities and experienced management.

Dodge Bearings in Long Service.

A strong testimonial of the long wearing service of Dodge transmission equipments

comes from London, Eng., in a letter to the company from Ernest Jackson, an engineer who has been using this equipment in a large London factory for the past 10 years. He states that the whole main line shafting and countershafting in this factory was fitted with Dodge ball and socket adjustable hangers, with bearings of the capillary self-oiling type. Up to the present date, he states, not a single bearing has run hot or required to be replaced in the 10 years of use and the bearings show no appreciable signs of wear.

To Handle Heavy Engineering Equipment.

The Southern Engineering-Equipment Co., Bluefield, W. Va., has been organized by Charles E. Stuart and S. H. Meem to sell and install structural iron, power plants, hydraulic machinery and equipments in conjunction with a general engineering business. Mr. Stuart was lately with the Westinghouse Electric & Manufacturing Co., and Mr. Meem was formerly a member of the mining and civil engineering firm of Meem & Hawkins and H. D. James of the Union Gas & Electric Co. of Cincinnati. The Southern Engineering-Equipment Co. will begin active business November 1.

"Linsine," a Substitute for Linseed Oil.

A material which is used in the place of linseed oil is manufactured by the Linsine Company, 1307 Pearl St., Philadelphia, and sold by them under their registered trademark. It is reported that the output of "Linsine" has been considerable since the result of years of experimenting has proven that it resists air and moisture, making it a waterproof material, a necessary feature for painting. Its drying qualities are also said to be excellent. Orders for this product are being filled as fast as the output permits, and additional plants are being erected for its production.

Houston Office of Buffalo-Pitts and Senger Engine Works.

Houston has been selected as the State headquarters for the Buffalo-Pitts Company of Buffalo and the Senger Engine Works of Lansing, Mich. The two companies have united interests there and will be under one management, with R. B. George as manager. In addition to the regular office forces the companies employ a large number of traveling salesmen, 15 men traveling out of Houston alone. The companies manufacture and sell gasoline engines of all sizes up to 50 horse-power. There is a large demand for gasoline engines in Texas industries, and the joint organization expects to do a big business in the State.

Landscape and Civil Engineering Work.

J. Spence Howard, civil and landscape engineer, 11 E. Lexington St., Baltimore, has the following work in progress: Landscape engineering on the 75-acre property of the Cumberland Heights Improvement Co. in Cumberland, Md., R. D. Johnson, president; improvements amounting to \$25,000 on the Caton Heights Improvement Co.'s property at Caton Heights, near Baltimore; development of 350 acres at Arden on the Severn for villa sites; locating six miles of car tracks for the Washington, Spa and Gretna Railroad from Bladensburg, Md., to a point near Berwyn, on which cars with storage batteries will be run.

American Locomotive Co.'s Sales.

Among the more important recent sales of the American Locomotive Co., 30 Church St., New York, are the following: To the Chickamauga Quarry Construction Co., Chattanooga, one Class 25 steam shovel, 1 1/4 yards capacity; to the Western Pacific Railway Co., one rotary snow plow, scoop-wheel type, 18x26-inch cylinders and 12-foot cut; Roger Miller & Son, Toronto, two four-wheel saddle-tank locomotives, cylinders 11x16 inches, driving wheels 33 inches, total weight in working order, 39,000 pounds; to P. Lyall & Sons, Ltd., Montreal, four-wheel saddle-tank locomotive, cylinders 13x18 inches, driving wheels 36 inches, total weight in working order, 56,000 pounds.

N. A. Middleton & Co., Construction Engineers.

Announcement has been made of the organization of N. A. Middleton & Co. to conduct a general engineering and construction business in Baltimore. Their previous experience with the construction of brick, concrete and vitrified-pipe sewers for the Baltimore Sewerage Commission places them in a position to do sewer and drain work expeditiously. The company makes a specialty of all kinds of excavation, clearing, grading and road work, cement and brick

walks, concrete and brick work. In the mechanical department special attention is given to steel tank, boiler and power plant designing and construction.

Hayton Pump Co.'s Installations.

Among the installations of turbo-centrifugal pumps made by the Hayton Pump Co., Quincy, Ill., is a three-inch two-stage pump for the water-works at Canton, Mo., the pump being electrically driven. The Lawrence County Water, Light & Power Co., Aurora, Mo., has ordered one two-inch pump for the city water-works service and one four-inch pump for fire service. A two-inch two-stage pump for use in connection with the coke elevating and feeding system of the Quincy Gas, Electric & Heating Co. at Quincy, Ill., has been installed. The Hayton company reports that it has had a very successful experience in the sales and installations of its line of pumps.

Vice-President of J. G. White & Co.

Mr. Gano Dunn, who for many years was first vice-president and chief engineer of the Crocker-Wheeler Company, and is a past president of the New York Electrical Society, has been selected a director and vice-president of J. G. White & Co., Inc. Mr. Dunn has just returned from Europe, where, as a representative of the United States Government and as president of the American Institute of Electrical Engineers, he has been attending the International Electrical Congress at Turin and the meeting of the International Electro-Technical Commission, the body that has been organized to bring about international uniformity of standards and practices in the electrical industry.

Addition to Vilter Manufacturing Co.'s Plant.

The Vilter Manufacturing Co., Milwaukee, has acquired an extensive piece of real estate opposite its present plant for the purpose of increasing and improving its facilities. Part of the new property will be immediately utilized for the purpose of erecting thereon a pipe shop 270 feet long by 120 feet wide, and equipped with the latest improved appliances for the machining and handling as well as storing of pipe used in connection with the refrigerating and ice-making plants built by this company. The new shops will have a spur track from the Chicago & Northwestern Railroad. This gives the company additional space covering more than three acres.

Dixey, Boggs & Co., Certified Accountants.

George T. Boggs, former vice-president of the Rock Island Company, and Thomas Bird Dixey have formed a partnership to continue the business of public accounting heretofore carried on in New York by Mr. Dixey, under the firm name of Dixey, Boggs & Co., with offices at 39 Church St. His long connection with the Rock Island Company has made Mr. Boggs widely known among the financial interests of New York and other centers. Mr. Dixey was formerly manager of a large accounting company, and later the chief accounting officer of the Delaware & Hudson Company. He was at one time president of the New York State Board of Examiners of Certified Public Accountants.

Terry Turbines With Gas-Blower Sets.

Among gas-blower sets recently sold by the Terry Steam Turbine Co., Hartford, Conn., are several of the Type Z-2, direct connected to a 3100 C. F. M. blower. Two each of these sets were purchased by the Roanoke Gas & Water Co., Roanoke, Va.; the Tidewater Power Co., Wilmington, Del., and the Georgetown Gas Co., Georgetown, D. C., and one by the Southern Gas Co., Miami, Fla. Blowers of other sizes sold include a 105-horse-power Terry turbine direct connected to a 13,000 C. F. M. blower for the Washington Gas Light Co.; two 12 1/2-horse-power Terry turbine gas-blower sets for the Bucks County Public Service Corporation, Langhorne, Pa., and a 7 1/2-horse-power set to the Mutual Gas Co., St. Johns, Mich. The company's general sales office is 90 West St., New York.

An Improved Molding Flask.

An improved type of molding flask which embodies a number of novel features is being placed on the market by L. J. Kreutzberg, 147 S. 9th St., Easton, Pa. One of the features of this flask is that it is made up of a number of copes, fastened together so as to form a unit with means for fastening the cope thus made to the drag. It also provides a novel form of fastening the several parts of the flask, which may be quickly clamped together or unclamped. Another feature consists of lugs permanently attached to the copes and drags, designed to

receive handles for lifting these parts and for transporting them. These lugs afford means for the use of long handles where cranes are lacking, the handles being capable of instant removal as soon as the flask is in place.

A Block System Safety Device for Railways.

A device has been invented and patented by C. B. Mitchell, Franklin, Tex., for operating block signals by means of an electric system, electro-magnetic controlling locks, etc. This invention is designed to provide a device which will positively operate the controlling devices of a railway locomotive, whether steam or electric, when danger conditions within a predetermined zone exist. Each train establishes a danger zone within prescribed limits which will operate to arrest the progress of another train approaching such a zone. It is claimed that the invention is capable of operating to any desired distance from the train being protected. A complete description of this device and the methods of operating it will be sent on request.

The Oscar V. Case Pecan Groves.

The value of pecan groves in the district from Texas to Georgia, which is especially adapted to the cultivation of pecan trees, is attracting considerable attention. Oscar V. Case of Fort Payne, Ala., has given special attention to this subject and has issued two pamphlets regarding it. One is entitled "Southern Facts and Alabama Figures," and the other, "Echoes from Dixie, the Land of Plenty." He has 50 tracts of land of five acres each, which he states are especially adapted to the cultivation of pecan trees and has offered for sale in our Classified Opportunities columns. He plans to manage tracts for non-resident owners, if preferred. He presents references from the president of the DeKalb County Bank, Fort Payne, Ala.; cashier A. J. Willford of the Nokomis National Bank, Nokomis, Ill., and others. These pamphlets and other information will be sent on request.

McMillan Blower Companies Merged.

Mr. T. H. McMillan of Savannah, Ga., has purchased the controlling stock of the Standard Blower & Metal Manufacturing Co. of Atlanta, and will merge this company with the South Atlantic Blow Pipe & Sheet Metal Co., recently organized. Mr. McMillan is a North Carolinian and has followed the turpentine industry for over 32 years in Savannah, previous to which time he was engaged in the manufacture of turpentine stills, fixtures and sheet-metal work at Fayetteville, N. C. He has branches of this business at Mobile, Ala.; Jacksonville, Fla., and Pensacola. The Standard Blower & Metal Manufacturing Co. is one of the largest blowpipe manufacturing companies in the South and has installed its slow-speed systems in many of the leading woodworking plants throughout that section. H. J. Hinchey, an expert on blower systems for planing mills, will give his entire time to designing of blower systems for woodworking plants.

Ruggles-Coles "Monel" Metal Department.

Mr. C. R. Vincent has been appointed manager of the "Monel" metal department of the Ruggles-Coles Engineering Co., 50 Church St., New York city, general agents for the Bayonne Casting Co. At its foundry in Bayonne, N. J., the latter company has for some years been making with success castings of this remarkable alloy that are claimed to be stronger than cast steel and less corrodible than bronze. Some of these castings range over 25,000 pounds in weight. Sheets, rods, wire and screens of the same metal will also be handled by the company with which Mr. Vincent is associated. The Pusey & Jones Company of Wilmington, Del., has placed an order with the Ruggles-Coles Engineering Co. for two 66-inch propellers to be cast of "Monel" metal for a large yacht which they are building. Recent comparative tests show that "Monel" metal soldered joints are from 15 to 20 per cent. stronger than similar ones made on copper sheets.

Addition to the Security Cement & Lime Co.'s Plant.

Changes contemplated in the plant of the Security Cement & Lime Co. at Berkeley, W. Va., will increase the capacity of its crushed-stone department about 1000 tons a day and the lime department about 1000 bushels a day. This is a 100 per cent. increase of the output of crushed stone and 25 per cent. increase of the output of lime. Recent sales made by this company include 1000 barrels Security Portland cement to P. Reddington & Sons, Baltimore; 850 barrels to Novak & Hirt, Baltimore; 300 barrels to

the Consolidated Engineering Co., Baltimore, through the National Building Supply Co.; 500 barrels to the Chesapeake & Ohio Canal Co., through Victor Cushman & Sons, Williamsport, Md. It is stated that the Berkeley plant has been operating to capacity for some time past and has a large number of orders on the books for lime, crushed stone and pulverized stone for ballast, construction and manufacturing purposes. The business in sight being in excess of its present capacity, the company has decided to increase its capacity to meet the demands for its products.

Fifteen Thousand Feet of Lead-Covered Cable Made in Two Days.

In making 15,000 feet of 100 pair lead-covered cable in two days the Western Electric Co. recently performed a remarkable feat that is believed sets a new record. The hurricane which swept over Charleston, S. C., in August left the city isolated from the rest of the world as far as communication was concerned. The Southern Bell Telephone Co. made such heroic efforts to put its plant in operation again that service was resumed in a remarkably short time. More lead-covered cable was needed, however, and the telephone company called up the Atlanta office of the Western Electric Co. and placed an emergency order for 15,000 feet, or nearly three miles, of 100-pair cable. The Atlanta house immediately wired the company's cable plant at Hawthorne, near Chicago. Two days later this 15,000 feet of cable was on its way. In two days nearly three miles of 100-pair cable had been manufactured, placed on huge reels and shipped. In making this cable nearly 12,000 pounds of copper conductor, over 40,000 pounds of lead and over 1300 pounds of tin were used. The Western Electric Co. uses yearly over 100,000,000 pounds of lead, 3,000,000 pounds of tin, 20,000,000 pounds of copper conductor and 4,000,000 pounds of insulating paper in the manufacture of telephone cable.

Frick Co.'s Sales of Refrigerating Machines.

Among recent important sales throughout the country of the refrigerating machinery, expansion piping, flooded freezing systems, distilling systems, ammonia condensers, etc., manufactured by the Frick Company, Waynesboro, Pa., many orders have been received from Southern cities. Of these installations the following are noted: The Mangum Ice & Cold Storage Co., Mangum, Okla., a 29-ton refrigerating machine; the Toccoa Ice & Coal Co., Toccoa, Ga., a flooded freezing system in place of its old form freezing system; Geo. M. Oyster, Jr., dairy products, Washington, a 30-ton refrigerating compression side, a five-ton improved flooded freezing system and brine piping for ice and milk storage; H. H. Vann, Thomasville, Ga., a six-ton refrigerating machine and direct-expansion piping for use in storage plant; C. L. Robinson & Co., ice and fruit storage, Winchester, Va., direct-expansion piping for a new cold-storage building; M. O. Rouss, fruit grower, Charlestown, W. Va., a six-ton refrigerating plant and direct-expansion piping for apple storage; the Hotel Richmond Corporation, Richmond, Va., a 20-ton compression side three-ton freezing system and a three-ton distilling system for use in the hotel; Agricultural and Mechanical College of Texas, College Station, a 10-ton refrigerating machine, drinking-water and brine-cooling tanks; Hotel Bentley Company, Alexandria, La., a 12-ton refrigerating machine, three-ton freezing system and three-ton distilling system.

TRADE LITERATURE.

Cortright Metal Shingles.

In a recent issue of the "Cortright Metal Shingle Advocate" note is made of the variety of climatic conditions to which the metal shingles manufactured by the Cortright Metal Roofing Co. of Philadelphia and Chicago are adapted. It is stated the company receives information from the extreme North and Northwest that this form of roofing admirably withstands the big drops in temperature to which that section is subject; from the tropical sections that it resists the powerful action of sea air, light and heat; from the temperate States, where changes are sudden and severe, that the roofing is flexible enough to successfully meet all conditions of atmosphere, heat and cold.

Electro Clock Co.'s New Catalogue.

A revised catalogue has been issued by the Electro Clock Co., 116 Mercer St., Baltimore. This catalogue contains all the styles of clock cases used with the Electro clock. The advantages of the Electro clock are explained, a price-list is included, also a num-

ber of letters recommending its use. Among the buildings equipped with these clocks are United States postoffices, the United States Weather Bureau offices, United States Agricultural Department buildings and the United States Courthouse, Washington, D. C. The Electro clock is one that does not require winding, it has no outside wires, and it is made for use in any place where timepieces are required.

Standard Roller Bearing Car Journals.

Bulletin No. 26 on "Standard" roller bearing journals has been issued by the Standard Roller Bearing Co. of Philadelphia. This bulletin states the uses and advantages of the bearings and results of nine years' tests of roller bearing journals operating under different conditions and in different kinds of service. Figures of costs showing the actual saving effected by roller bearings are included. Several pages are devoted to large illustrations of the bearings showing their operation in different classes of equipment.

Lehigh Portland Cement Co.'s 41 "Concrete" Reasons.

A second edition of 15,000 copies of the pamphlet "41 Concrete Reasons," published by The Lehigh Portland Cement Co., Allentown, Pa., has been issued. This second edition contains numerous illustrations applying to the 41 "concrete" reasons why concrete should be selected in construction work. Each of these reasons is treated separately in detail and examples given illustrating the points made. Some of the reasons thus treated are safety, durability, fireproofness, decreased maintenance, shock absorption, adaptability, waterproofness and soundproofness, permanency of investment, increasing value of building, decreased insurance, advantages in interior and exterior finish, flexibility of design, and architectural finish.

The Taylor Automatic Stoker.

A catalogue of the Taylor automatic stoker has just been issued by its manufacturer, the American Ship Windlass Co., Providence, R. I. This stoker is illustrated in several views in which the different parts are named. Other illustrations show power plants in which the stokers are installed. These include the New York Edison Water-side station, the Christian St. station of the Philadelphia Electric Light Co., the Detroit Edison Co., the Everett Mills of Lawrence, Mass., and the Oxford Paper Co. of Rumford Falls, Me. Another illustration shows what is claimed to be the largest stoker ever built, being that for the Hartford Electric Light Co. The Taylor stoker is exhibited installed ready for operation at the convention of the Electric Railway Associations now being held at Atlantic City.

"Brownhoist" Locomotive Cranes.

A pamphlet has been issued by the Brown Hoisting Machinery Co., Cleveland, illustrating and describing Brownhoist locomotive cranes equipped with Brownhoist grab bucket, bottom block and lifting magnet and showing typical illustrations of the Brownhoist cranes and equipment. It contains 50 full-page illustrations of Brownhoist locomotive cranes of various capacities, each engaged in different kinds of work. The "Brownhoist" patented grab bucket is for use with any loose material, ore, coal, coke, ashes, crushed stone, gravel, sand, slag, etc. It will excavate in any ordinary soil. The bottom block will handle miscellaneous material, such as logs, lumber, machinery, castings, tubs, structural material, etc. The lifting magnet is attached directly to the bottom block, and will handle pig-iron, steel and iron castings and forgings, steel and iron scrap, and any other magnetic material. These locomotive cranes have the slip friction ring feature, by means of which jar and wear on the rotating mechanism are eliminated.

Hot Blast Heating and Ventilating.

The information required for designing hot-blast outfits for heating, ventilating and drying purposes has been brought together in a book entitled "Heating and Ventilating" and published by the Green Fuel Economizing Co., Matteawan, N. Y. The book contains a number of valuable tables applying to the subjects of temperatures, heat transmission, relative humidity, friction of air through hot-blast coils, etc. It treats not only of the usual details relating to construction of fans, heaters and ventilators, but also calculations for designing of piping systems. One chapter gives the result of an extensive series of tests upon Green's "Positive-flow" steam-heating coils, by means of which heaters of suitable sizes may be selected for any given duty. The book will be sent upon request to architects, heating and

ventilating engineers and others interested in the purchase, design or operation of heating plants.

C. G. Hussey & Co.'s New Price-List.

In presenting its new price-list, table book and catalogue C. G. Hussey & Co., proprietors of Pittsburgh Copper & Brass Rolling Mills, Pittsburgh, call special attention to their increased facilities for rolling and shipping manufactured products promptly, also to its new sheet and plate mills, which give additional capacity. The company carries in stock sizes, ready for shipment from the Pittsburgh Mills, over 1,000,000 pounds of copper. The catalogue contains illustrations of various products, numerous tables and a new price-list.

Moloney High Efficiency Transformers.

A comprehensive catalogue has just been issued by the Moloney Electric Co., St. Louis, Mo., covering lighting and power transformers, single and three-phase, pole, subways and station type, in sizes up to 5000 kilowatts of any voltage; also tungsten sign transformers. The detail of manufacture is fully discussed and the various methods of testing for core, copper and regulation are stated. This company has recently opened a branch office in Windsor, Ont., and a number of large orders have recently been filled.

Thomas Elliptic Gate Bars.

A partial list of the steam plants and railroad companies using Thomas "Elliptic" gate bars has been compiled and published for distribution by the Thomas Gate Bar Co., Birmingham, Ala. The list contains the names of 500 users of these gate bars, noting repeat orders and in some cases stating the considerable saving in coal used as a result of installing the Thomas gate bars. It is stated that the percentage of repeat orders increases daily and that about 25 per cent. of this list of users have given second, third or fourth, and in some cases fifth repeat orders. This list and other information will be sent to interested persons on request.

Yorke Structural Steel Derricks.

The value of steel in structural work has been applied by the Yorke Derrick Co., Washington, Pa., to the construction of steel derricks for drilling wells for oil, gas, salt and water. These steel derricks can be taken down and moved without deterioration. They have steel tops, steel crown block, steel ladders and all-steel bases, so that all that is necessary in dismantling is to loosen the bolts of the frame. By the use of steel a derrick that combines strength, lightness, durability and convenience is obtained. Comparisons between old-type derricks and this new steel derrick are made with illustrations of each. Directions for erecting and handling the derrick are included.

Wagner Unity Power Factor Single-Phase Motors.

The unity power factor, Wagner type BK, constant-speed single-phase motor is described and its advantages explained in detail in Bulletin 94, recently issued. This bulletin also contains illustrations of the motor, of its stator windings, of the motor construction features, of its application to machinery drives, and of a BK motor-operated milling machine. It is stated that the principles evolved by this new design of a constant-speed motor have made possible the production of a successful adjustable-speed single-phase motor. The subject of unity power factor is practically analyzed and illustrated with curve diagrams and tables.

J-M Asbestos Covering for Heating Systems.

The approaching season has been appropriately recognized by the H. W. Johnson-Manville Company by devoting its recent number of the J. M. Packing Expert to the subject of asbestos coverings for heating systems. Illustrations of J-M asbestos in sheets for covering hot-air furnaces and pipes and in thick sectional coverings for steam and hot-water pipes and boilers are shown. In this connection it is stated that "the manufacturer who has not so covered his pipes and steam surfaces that every pound of coal yields him its fullest equivalent of steam, heat and power, is handicapped at the outset and speedily outdistanced by his more thoughtful competitor whose power plant specifications have given him insulation materials of such high efficiency that delivery of as much as 97 per cent. of his steam has become a possible achievement."

Ingersoll-Rand Co.'s Compressors.

Bulletin No. 3007 has been published by the Ingersoll-Rand Co., 11 Broadway, New York, illustrating and describing its Class "PB"

power-driven air compressor, duplex type, with air cylinders close-coupled to the frame and a central driving wheel. This catalogue shows several sectional views of the machine and includes tables of capacities and sizes. The distinctive features of this design are its massive construction and its simplicity, rugged strength, ample reserve power and capacity for hard work. The machine is readily accessible both inside and out, and is provided with flood lubrication system. Automatic control of the pressure and regulation of load and output are provided by governing devices.

Allis-Chalmers Company's Bulletins.

Bulletins Nos. 1068, 1074 and 1083, issued by the Allis-Chalmers Company, Milwaukee, treat, respectively, of direct-connected Corliss engines, "Reliance" pattern; direct-current motors and generators, Types "H" and "HL," and direct-current motors and generators, Type "K." These products of its power and electrical department are described and illustrated in detail. The Type "K" motors are shown connected with various machines to which it is applicable. It is described as suitable for all classes of work for either a constant or variable speed where a direct-current motor is required. A list of the principal products of the Allis-Chalmers Co. is included in each of these bulletins, together with its 29 American district offices, six Canadian branches, four foreign district offices and nine foreign sales agencies.

Westinghouse Rotary Converters.

Rotary converters are being used in many coal and metal mines since direct current is necessary for the operation of mining locomotives. Rotary converters as manufactured

by the Westinghouse Electric & Manufacturing Co., East Pittsburgh, are found to be efficient machines for converting alternating to direct current at the point where the energy is to be used. The company's circular No. 1028 describes and illustrates Westinghouse rotary converters, which are manufactured in all sizes up to units of 3000 kilowatts capacity, adapted for light, power and traction service, etc. An example of the mining plant installation of rotary converters is that of Mine 22 of the Consolidated Coal Company in Pennsylvania. This station receives energy from alternating current at 2300 volts, three-phase, 60-cycle. This pressure is stepped to 158 volts for the alternating side of the Westinghouse 150-kilowatt rotary converters and is delivered therefrom at direct current at 275 volts. In large mines it is sometimes expedient to locate rotary converters underground near the center of the area that they serve. This is the case of mine No. 55 of the Consolidated Coal Co., where the incoming lines for alternating current are for 2300 volts and the converters deliver current at 275 volts. The transformers for stepping down from the 2300 volts to 158 at the rotary converter are also located in substations. A two-panel black marine finished switchboard carries the equipment for metering and controlling the incoming and outgoing lines, the transformers and the rotaries. Recent publications of this company also include circular No. 1190 on Westinghouse engine-driven alternating-current generators, type E; folders on watt-hour meters, types "OA" and "C"; Westinghouse electric irons, Westinghouse alternating-current switchboard meters and Westinghouse direct-current switchboard meters.

distance covered was 200 miles, and this truck not only received a perfect road score during the three days, but passed the technical examination also with a perfect score. This technical examination consists of brake tests, clutch tests, gear tests, and a general examination for broken and damaged parts. The reputation of the Alco truck is based upon the record of a company which dates back to 1835 as a mover of the world's goods, with 50,000 locomotives built in that time.

Has the Rush for Motor Trucks Begun?

The editorial statement recently made in the Manufacturers Record that "the motor truck is destined to far surpass in economic importance the automobile" is illustrated in the sales the past week of 100 Packard trucks on two orders by the Packard Motor Co.'s branch at Philadelphia. Fifty of these trucks are for the Acme Tea Co. of Philadelphia and 50 are for the Gimbel Brothers, who conduct department stores in Philadelphia and New York. These orders represent about \$300,000. Individuals need only one or two automobiles, but the individual business establishment needs 50 or more, and for this reason the probable future demands for motor trucks can scarcely be estimated.

The "Federal" One-Ton Motor Truck.

A truck which is attracting the attention of motor-truck experts in the East, and which is said already to have built up a splendid reputation in the middle West, is the "Federal" one-ton truck manufactured by the Federal Motor Truck Co., Detroit. This truck distinguished itself in the recent Chicago American reliability run from Chicago to Detroit and return by finishing with a perfect road score and winning the cup in the 2000 to 3000-pound class. The contest was intended as a demonstration of what a motor truck could do in a long-distance hauling, and without adjustment for repairs, and it undoubtedly showed this. But for the three days through Michigan it developed rather into a test of what punishment a motor truck would endure without serious injury. Under these trying conditions the Federal gave a wonderful exhibition of strength and reliability. The Motors Engineering & Sales Co., 250 W. 54th St., New York, has recently become the general Eastern distributor for the Federal truck, and several orders have already been placed, the American Bank Note Co. and Witherbee, Sherman & Co., Inc., being among the purchasers.

Avery Trucks Used in Towing Trailers.

The well-known economy of towing large volumes of freight by a single motive power is being applied to motor trucks and tractors as their numbers increase. Our coastwise coal trade is largely carried on by cargo-conveying barges of large tonnage towed by powerful tugs, each comparatively small tug handling several barges. The same principle applies in the hauling of long trains of cars with one locomotive. The accompanying illustration shows the same principle applied in the use of motor trucks and tractors in hauling loaded wagon trains. This Avery truck is shown hauling crushed stone for the Ellis Park Crushed Stone Co. at Cedar Rapids, Ia. The net loads of crushed stone are for the truck 7680 pounds, and for the trailers 5450 pounds each, making a total of 18,580 pounds. As much as 8800 pounds has been hauled on the truck alone. This truck delivers the crushed stone to contractors for building work in the city of Cedar Rapids and the surrounding country. Other Avery trucks engaged in similar work in various parts of the country include that of the Clark Lumber Co. of Grinnell, Ia., which delivers sand and other building materials to contractors in that vicinity. Many of these trucks are used for hauling purposes in con-



AVERY MOTOR TRUCK HAULING CRUSHED STONE.

nection with road, bridge, ditch and construction work and for hauling ore. The Avery trucks fitted with special country road wheels with perforated cast-steel rim and wood plug tires are said to be proving quite successful in their special line of work.

Clarksburg's Facilities.

Board of Trade.

Clarksburg, W. Va., October 17.

Editor Manufacturers Record:

A contract has been let by the Baltimore & Ohio Railroad for the building of up-to-date umbrella sheds along the platform in front of the passenger depot and extending up to the main entrances to that building. They will be so built and of such a substantial character as to fit in with the proposed new station. There are also great improvements in hand for the enlarging of our freight depot.

It is very gratifying to the citizens of Clarksburg generally and to the Board of Trade particularly that our recent efforts looking to betterments in the way of handling both freight and passengers at this point are about to be crowned with success.

H. V. D. KING, Secretary.

Industrial Grenada.

Business League.

Grenada, Miss., October 12.

Editor Manufacturers Record:

Grenada is situated at the head of navigation of the Yazobusha River, and is the converging point of two lines of the Illinois Central Railroad and the terminus of one line of the Yazoo & Mississippi Valley. The population is about 4000. It is 112 miles north of Jackson, the State capital, and 100 miles south of Memphis. We have two fine graded schools, a very flourishing college for girls and a large private school for boys, and there are no saloons. We have three banks, with an aggregate capital of \$450,000 and deposits of \$1,100,000. Grenada owns its own water and light plant and sewerage system. The water is supplied from artesian wells. Water and lights are supplied cheaply.

We are situated in the center of some of the finest hardwood timber in the world, white and red oak, considerable quantities of second growth hickory, and large quantities of red gum. We have 60,000 acres of hardwood practically in one block, affording a fine field for sawmills and manufacturing plants. A box factory and a wagon and spoke factory, bending works, etc., would prosper here. We have large quantities of Wilcox clay suitable for manufacturing pottery, stoneware and for use in Portland cement; also large quan-

MOTOR TRUCK AND TRACTOR NEWS.

Ford Motor Co.'s Service Depots.

The network of branches and service depots with which the Ford Motor Co. covers the United States and Canada has recently been extended by establishing branches at Memphis, Tenn.; Los Angeles, San Francisco and Vancouver. Those cities will be headquarters of the sale of Ford cars in their adjacent territories. It has been found necessary to put in these new branch houses that the business might be facilitated to a greater degree.

Motor Trucks Used in Mining.

Motor trucks have been introduced into the mining industry in the vicinity of Spokane, Wash. The Pacific Coast Smelting, Refining & Mining Co. of Libby, Mont., has purchased a three-ton truck for use in hauling concentrates from its mines near Spokane to the smelter, a distance of seven miles. The company has 2000 tons of concentrates to be moved before snow falls, and the truck will be used for seven trips a day, making a total distance of 98 miles a day, averaging five tons to the load.

"Detroit" Motor Wagons in Jacksonville.

Motor delivery is being advocated and advanced in Jacksonville, Fla., by the local automobile companies, among which is the Autman Motor Co., agent for the "Detroit" motor wagon, manufactured by the Motor Wagon Co. of Detroit. It is stated that motor delivery having been brought to a common-sense economical basis is now within the reach of the average retail merchant. "The retailer wants motor delivery; he keenly recognizes the need, and he won't be satisfied until he gets it."

G. M. C. Electric Trucks.

The General Motors Truck Co., Detroit, as a result of "quantity" production, has reduced the price of five-ton G. M. C. electric keg trucks to \$3550 and the three-ton electric wagon to \$2250. It is stated that such prices, combined with the G. M. C. standardized quality, means that the number of users of horse-drawn vehicles that are now investigating motor trucks will be largely increased. This price has been attained by placing production on a wholesale basis and by the thorough economies in purchasing and merchandizing that are practiced by the General Motors Co. Both gasoline and electric trucks are sold by this company.

Franklin Trucks in United States Mail Service.

Three Franklin trucks are to be used in the United States mail service in Washington, D. C., for the transportation of employees in the Postoffice Department. The work is to be by contract with David S. Hendrick, the Franklin dealer in that city. The trucks are to be fitted for carrying letter-carriers and mail between the postoffice

and distant parts of the city. When there are several letter-carriers whose routes begin in an outlying section, they, with their mail, will be taken on a truck to points where their routes begin. The trucks are equipped with four-cylinder, 18 horse-power, air-cooled motors. They are manufactured by the H. H. Franklin Company, Syracuse, N. Y.

Recent Additions to the Baltimore Motor Truck Fleet.

Motor trucks and delivery wagons have been recently purchased by the following Baltimore firms, and are now in service: Joel Gutman & Co., dry goods and notions, the Kroenberger Coffee Co., and the Montebian Water Co. have each purchased International delivery wagons; Bernheimer Brothers' department store has added another Mack truck to its suburban and city delivery service; The Hub, general outfitters, and the Albrecht Company have each purchased a Ford Model T light delivery wagon. The Baltimore branch of the Fisk Tire Co. has purchased a Brush delivery wagon.

The Automobile Industry in Houston.

The great development of the automobile industry in the South and Southwest is illustrated by the example of Houston, Tex., and the prospective growth of the motor-truck industry, which will far exceed that of the automobile, may be partially gauged by this wonderful invasion. G. W. Haykins, writing for the Houston Chronicle on "Ten Years in the Automobile Trade in Houston," states that he introduced the first gasoline automobile in Houston in 1901, and that in this banner season of 1911 for the past 12 months 900 cars have been registered at the county clerk's office, of which 70 per cent. are new cars. The number of dealers now is 18, besides numerous repair shop owners, who do not sell cars. The industry has brought other kindred lines into the city. There are now located in Houston five branch houses of large tire manufacturers and two accessory and supply houses, one of which also carries tires. The total volume of business done in and tributary to Houston probably reaches \$1,500,000 to \$2,000,000 annually. A dealer with well-established lines can feel sure of a profitable future business, and the buying public can feel reasonably certain of buying good and serviceable cars. The automobile and motor-truck business is now considered one of our staple commercial lines, the same as any other line of commerce.

The Alco Truck's Chicago Record.

Among the motor trucks that received a perfect score in the recent truck run held by the Chicago Motor Club was the Alco truck, manufactured by the American Locomotive Co., 1886 Broadway, New York. This truck carried a load of 7155 pounds. The

ties of clay suitable for the manufacture of brick and tile. This affords a fine opportunity for pottery, tile and brick plants, which business is scarcely developed here as yet.

We have now in the way of manufacturing enterprises two large cottonseed-oil mills; a compress handling 48,000 bales of cotton per annum; a delinting plant; two brick plants and a tile plant; a very large plant for creosoting piles, telegraph poles

and bridge timbers and making paving blocks; a large lumber yard; a wholesale grocery; ice and cold-storage plant with a capacity of 30 tons. We have magnificent water-power supplied by Yalobusha River and Bateau-pan-Bogue sufficient to furnish energy for almost unlimited manufacturing enterprises. Payrolls of our various industries amount to about \$3400 per week, or \$178,000 per annum.

As a place of residence, Grenada is not excelled by any town in the South. It is very accessible, 20 trains daily entering its passenger station. Our people have to send away from home to do their charity, for we have no paupers. This is a good city to live in, and good people live in it.

J. G. NEUDORFER, Secretary.

A Texan Fiber Plant.

Sanderson, Tex., October 4.

Editor *Manufacturers Record*:

In this section are vast quantities of "lechugilla," a fiber plant well adapted to the manufacture of rope, binder twine, matting and similar things. Enterprising men with some capital might find it to their interest to come here and investigate.

H. C. WHITFIELD.

Beaumont-Orange Waterway.

Geo. W. Bancroft, secretary Orange County Navigation District, Orange, Tex., writes to the *MANUFACTURERS RECORD*:

"By act of the Legislature of Texas, authorizing counties in this State to organize navigation and canal districts, and by a vote of two-thirds of the property taxpayers in said district in favor of a bond issue of such amount as required by the navigation and canal commissioners in each district, Jefferson county, of which Beaumont is the county-seat, and Orange county, of which Orange is the county-seat, organized such districts. Elections were held and bonds were issued and sold and the proceeds from the sale of the bonds have been deposited to credit of the Secretary of War in national banks in each of these two cities designated by the Secretary of War to cover one-half the cost of providing a 25-foot waterway to these two cities from the Gulf of Mexico. By act of February 27, 1911, in the National Congress, the Government agrees to pay half the cost of providing said waterway, provided these two districts pay over to the Secretary of War the other half. The total cost of this project, as estimated by the Government engineers, is \$1,003,000, and will give Orange a 25-foot waterway to the Gulf of Mexico, a distance of 40 miles, and same for Beaumont, a distance of 55 miles. At present we have a 10-foot waterway to the Gulf. It is expected the engineers in charge of this work will be ready to receive bids on this work within the next 60 days, and the work completed within 12 months after it is begun."

In Baldwin county, Alabama, 50,000 pecan trees are now growing, and the acreage will be largely increased this year.

The output of factories in Oklahoma last year had a value of \$50,000,000, an increase over the preceding year of \$20,000,000.

FINANCIAL NEWS

Review of the Baltimore Market.

Office *MANUFACTURERS RECORD*,

Baltimore, Md., October 18.

In the Baltimore stock market during the past week, while there was not much difference in the volume of business as compared with the preceding week, prices were better. In the trading United Railways common sold from 18½ to 18; do. incomes, 62½ to 64; do. funding 5s, 85 to

87; do. notes, 98½ to 99¼; do. 4s, 85½ to 86; Consolidated Gas, Electric Light & Power common, 93½ to 94; do. preferred, 98½ to 98½; do. 4½s, 86½ to 87; do. notes, 90½; Consolidated Gas 4½s, 96½; Seaboard Company common, 26; do. second preferred, 59 to 60; Seaboard 4s, stamped, 86½ to 87; do. adjustment 5s, 77½ to 78½; Mt. Vernon-Woodberry Cotton Duck 5s, 74½ to 74½; G.-B.-S. Brewing 4s, 40½.

Bank stocks sold as follows: Bank of Baltimore, 181 to 183; Citizens', 41; First National, 144; Drovers and Mechanics', 210; Farmers and Merchants', 52 to 51½; Maryland, 24½; Merchants', 185; Bank of Commerce, 31½; Marine, 43½; Western, 37½.

Mercantile Trust sold at 145; Maryland Casualty, 92; Maryland Trust preferred, 116; Fidelity & Deposit, 148½; American Bonding, 77.

Other securities were traded in thus: Atlantic Coast Line common, 127; do. Consolidated 4s, 95½; do. convertible debenture 4s, 99½ to 100½; Baltimore Traction 5s, 107; Fairmont & Clarksburg Traction 5s, 99½ to 99½; Houston Oil common, certificates, 8½; do. preferred, 72; Northern Central Railway stock, 124½; Georgia & Alabama Consolidated 5s, 105½; Baltimore City 3½s, 1930, 95; do. do. 1980, 88; do. 4s, 1960, 101½ to 101½; Western Maryland 4s, 87; Norfolk & Portsmouth Traction 5s, 86½; Wilmington & Weldon 5s, 110½ to 110½; Fairmont Coal 5s, 96½ to 96½; Consolidation Coal, 100½ to 100½; Georgia Pacific 1st 6s, 113; Maryland & Pennsylvania incomes, 58; Roland Park Electric & Water 5s, 101; West Penn Traction 5s, 97; Alabama Consolidated Coal & Iron 5s, 86 to 85; Baltimore Electric preferred, 40½; do. 5s, stamped, 94½; Norfolk Railway & Light 5s, 99½ to 99½; do. common, 26½; Georgia Southern & Florida first preferred, 92½; Virginia Century, 87½; Charleston Consolidated Electric 5s, 97; Coal & Iron Railway 5s, 101½; Chicago Railway 5s, 90½; Washash Equipment 5s, 1921, 99½; Pittsburgh-Allegheny Telephone 5s, 70.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended October 18, 1911.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	126	127
Atlantic Coast of Conn.....	100	250	
Charleston Consolidated.....	50	33	
Fairmont & Clarks Trac. Com.....	100	80	
Georgia & Ala. 1st Pfd.....	100	8	10
Georgia S. & F. 2d Pfd.....	100	85	
Macon Railway & Light.....	100	100	111
Norfolk Railway & Light.....	25	26	26½
Seaboard Co. Common.....	100	25½	27½
Seaboard Co. 1st Pfd.....	100	82½	86
Seaboard Co. 2d Pfd.....	100	59	60
United Ry. & Elec. Co.....	50	18	18½
Virginia Ry. & Power Pfd.....	100	77½	

Bank Stocks.	Par.	Bid.	Asked.
Bank of Baltimore.....	100	181½	183
Bank of Commerce.....	100	31	
Drovers & Mechanics.....	100	210	220
Exchange.....	100	163	164½
Farmers & Merchants.....	40	51½	
First National.....	100	143	145½
Howard.....	10	13½	
Marine.....	30	42	
Mechanics.....	10	28	29
Merchants.....	100	185	
Union.....	100	130	
Western.....	30	38	41

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
American Bonding.....	25	75½	78
Baltimore Trust.....	100	165	
Colonial Trust.....	50	27	
Fidelity & Deposit.....	50	147½	152
Maryland Trust Pfd.....	100	113	116½
Maryland Casualty.....	25	92	93
Mercantile Trust & Deposit.....	50	144	
Safe Deposit & Trust.....	100	450	

Miscellaneous Stocks.	Par.	Bid.	Asked.
Ala. Con. Coal & Iron.....	100	35	50
Ala. Con. Coal & Iron Pfd.....	100	60	
Baltimore Brick.....	100	2½	
Con. Cotton Duck Pfd.....	50	18	
Con. Gas, Elec. Lt. & P. Com.....	100	93½	93¾
Con. Gas, Elec. Lt. & P. Pfd.....	100	98	99
Consolidation Coal.....	100	100½	101
G.-B.-S. Brewing Co.....	100	¾	1½
Mer. & Miners' Trans. Co.....	100	69	80

Railroad Bonds.	Par.	Bid.	Asked.
Atlantic Coast 1st 4s.....	100	95½	
Atlantic Coast Conv. Deben. 4s.....	100	99½	100
At. Coast (Conn.) 4s, Cfs., 5-20s.....	100	92½	
Atlantic Coast (Conn.) 5s, Cfs.....	100	104	
Brunswick & Western 4s.....	100	95½	97
Charleston & West. Car. 5s.....	100	105½	106
Coal & Coke Railway 5s.....	100	92	94
Coal & Iron Railway 5s.....	100	101	101½
Georgia & Alabama 5s.....	100	105	105½
Georgia, Car. & North. 1st 5s.....	100	112½	113
Georgia Pacific 1st 6s.....	100	112½	113
Macon, Dublin & Savannah 5s.....	100	97	99
Seaboard 4s, Stamped.....	100	87¾	87¾
Seaboard Adjustment 5s.....	100	73¾	
Seaboard Refunding 4s.....	100	82	
Seaboard & Roanoke 5s.....	100	105½	106½
South Bound 5s.....	100	107	110
Virginia Midland 5th 5s.....	100	106	
Western Maryland 4s.....	100	87¾	
Western N. C. 6s.....	100	104½	105
Wilmington & Weldon 5s.....	100	110½	111

Street Railway Bonds.	Par.	Bid.	Asked.
Anacostia & Potomac 5s.....	100	100	102
Anacostia & Potomac 5s, Gtd.....	100	101½	
Balto., Sp. Pt. & C. 4½s.....	100	96	96½

Baltimore Traction 1st 5s.....	107	109
Balto. Traction (N. B.) 5s.....	109½	111
Charleston City Railway 5s.....	102½	
Charleston City Electric 5s.....	95½	97
City & Suburban 5s (Balto.).....	105	106
City & Suburban 5s (Wash.).....	103½	105
Fairmont & Clarksburg Trac. 5s.....	99¾	99¾
Lake Roland Elevated 5s.....	108	109
Macon Railway & Light 5s.....	98½	99½
Maryland Electric Railways 5s.....	98½	99½
Memphis Street Railway 5s.....	98½	
Newport News & O. P. G. M. 5s.....	57	
Norfolk & Portsmouth Trac. 5s.....	86¾	88
Norfolk Railway & Light 5s.....	99¾	99¾
Norfolk Street Railway 5s.....	104	107½
United Railways 1st 4s.....	85¾	86
United Railways Income 4s.....	63¾	64
United Railways Funding 5s.....	87	87½
United Railways Notes 5s.....	98¾	99

Miscellaneous Bonds.	Par.	Bid.	Asked.
Ala. Con. Coal & Iron.....	85	86	
Baltimore Electric 5s, Stp.....	94	94½	
Consolidated Gas 5s.....	108	108¾	
Consolidated Gas 4½s.....	96	96½	
Con. Gas, Elec. Lt. & P. 4½s.....	87	87¾	
Fairmont Coal 1st 5s.....	96	97	
G.-B.-S. Brewing 1st 4s.....	40	41	
G.-B.-S. Brewing Income 5s.....	3	5	
Maryland Steel Co. 5s.....	101	101½	
Mt. Vernon-Woodby Cot. Duck 5s.....	74½	75	
United Elec. Lt. & P. 4½s.....	93¾	94½	

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending October 16.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	75	
Alcon Mfg. Co. (S. C.).....	80	
American Spinning Co. (S. C.).....	160	
Anderson Cotton Mills (S. C.).....	48	
Anderson Cot. Mills (S. C.) Pfd.....	100	
Arcadia Mills (S. C.).....	92	
Arkwright Cotton Mills (S. C.).....	99	100
Augusta Factory (Ga.).....	40	
Avondale Mills (Ala.).....	116	
Belton Mills (S. C.).....	120	130
Brandon Mills (S. C.).....	98	103
Brogan Mills (S. C.).....	135	
Cannon Mfg. Co. (N. C.).....	135	
Cabarrus Cotton Mills (N. C.).....	130	135
Chadwick Mfg. Co. (N. C.) Pfd.....	100	
Chiquola Mfg. Co. (S. C.).....	170	
Clifton Mfg. Co. (S. C.) Pfd.....	97	
Clinton Cotton Mills (S. C.).....	120	
Columbus Mfg. Co. (Ga.).....	93	98
Courtenay Mfg. Co. (S. C.).....	100	
Dallas Mfg. Co. (Ala.).....	99	
Darlington Mfg. Co. (S. C.).....	80	
D. E. Converse Co. (S. C.).....	90	
Drayton Mills (S. C.).....	95	100
Eagle & Phenix Mills (Ga.).....	117	
Easley Cotton Mills (S. C.).....	162	175
Enoree Mfg. Co. (S. C.).....	50	65
Enoree Mfg. Co. (S. C.) Pfd.....	96	100
Enterprise Mfg. Co. (Ga.).....	65	75
Exposition Cotton Mills (Ga.).....	200	
Gaffney Mfg. Co. (S. C.).....	55	60
Gainesville Cotton Mills (Ga.).....	72	80
Glenwood Cotton Mills (S. C.).....	130	150
Gluck Mills (S. C.).....	99	
Granby Cot. Mills (S. C.) 1st Pfd.....	35	45
Granville Mfg. Co. (S. C.).....	140	145
Greenville Cotton Mills (S. C.).....	57	60
Grendel Mills (S. C.).....	90	100
Hartsville Cotton Mill (S. C.).....	160	175
Hendetta Mills (S. C.).....	190	175
Inman Mills (S. C.).....	100	105
King Mfg. Co., J. P. (Ga.).....	80	85
Lancaster Cotton Mills (S. C.).....	130	
Lancaster Cot. Mills (S. C.) Pfd.....	97	100
Langley Mfg. Co. (S. C.).....	104	112
Laurens Mills (S. C.).....	127	135
Limestone Mills (S. C.).....	155	160
Lockhart Mills (S. C.).....	65	
Lockhart Mills (S. C.) Pfd.....	90	
Loray Cotton Mills (S. C.).....	95	
Marlboro Cotton Mills (S. C.).....	80	
Mills Mfg. Co. (S. C.).....	102	
Molloy Mfg. Co. (S. C.).....	95	
Monaghan Mills (S. C.).....	100	
Monarch Cotton Mills (S. C.).....	100	
Newberry Cotton Mills (S. C.).....	125	130
Ninety-Six Cotton Mills (S. C.).....	130	150
Norris Cotton Mills (S. C.).....	121	130
Orr Cotton Mills (S. C.).....	90	93
Orr (S. C.).....	90	
Pacolet Mfg. Co. (S. C.).....	90	
Pacolet Mfg. Co. (S. C.) Pfd.....	95	100
Parker Common.....	40	
Parker Pfd.....	75	
Pelzer Mfg. Co. (S. C.).....	163	
Piedmont Mfg. Co. (S. C.).....	175	177
Poe Mfg. Co., F. W. (S. C.).....	110	115
Saxon Mills (S. C.).....	65	
Shiloh Mfg. Co. (Ga.).....	65	
Spartan Mills (S. C.) Pfd.....	120	130
Trion Mfg. Co. (Ga.).....	130	
Tucapau Mills (S. C.).....	310	350
Union-Buffalo (S. C.) 1st Pfd.....	75	
Union-Buffalo (S. C.) 2d Pfd.....	16	
Victor Mfg. Co. (S. C.).....	110	115
Warren Mfg. Co. (S. C.).....	80	95
Warren Mfg. Co. (S. C.) Pfd.....	100	105
Washington Mills (Va.).....	28	
Washington Mills (Va.) Pfd.....	106	110
Whitney Mfg. Co. (S. C.).....	110	
Wiscasset Mills (N. C.).....	125	
Woodruff Cotton Mills (S. C.).....	110	115
Woodside Cotton Mills (S. C.).....	95	100
Watts Mills (S. C.).....	80	90
Williamston Mills (S. C.).....	120	125

Announcement of Merger Plan.

Formal announcement is made in another column of the reorganization and merger plan of the Southern Iron & Steel Co. and the Alabama Consolidated Coal & Iron Co., the announcement being addressed to the holders of the securities. It is stated that the unanimous judgment of the committee which has been formed is that both companies will be largely benefited by the proposed merger, and that the basis of consolidation is just. A full account of the merger appeared on page 49 of the *MANUFACTURERS RECORD* of October 12.

FINANCIAL CORPORATIONS.

Ark., Marianna.—The People's Savings Bank & Trust Co., capital \$100,000, is reported incorporated; W. D. Newbern, president; S. H. Crowe, vice-president, and R. L. Allen, secretary and cashier.

Fla., Jacksonville.—The Heard National Bank of Jacksonville is reported approved; capital \$1,000,000; J. J. Heard, Jacksonville; E. H. Tomlinson, J. G. Boyd, F. R. McConnell and D. H. McMillan.

Fla., Jacksonville.—The Southern Trust Co., capital \$100,000, will, it is reported, make application for a charter. Business is expected to begin about January 1 with directors thus: Clifford R. Allen, president; George W. Rhodes, vice-president; W. H. Milton, treasurer and trust officer; Daniel A. Simmons, general counsel and secretary, and H. V. Mound of Marianna, Fla.

Ga., Atlanta.—Official: Louis B. Magid & Co. of Atlanta, investment bankers, 1014 1/2 Candler Bldg., incorporated; capital \$100,000; surplus \$25,000, fully paid in; Louis B. Magid, president; M. D. Berrier, secretary. Business began October 1.

Ga., Carlton.—The Planters' Bank, capital \$25,000, is reported organized with directors thus: R. W. Huff, president; O. A. Stevens, first vice-president; L. H. Eberhardt, second vice-president; Dr. J. L. Baker, T. S. Cunningham, J. D. Burt, Otho David, S. M. Seymour and G. M. Faust.

Ga., Dahlonega.—The Bank of Lumpkin County is reported to have made application for a charter; capital \$25,000. Incorporators, G. R. Glenn, Mrs. Brilla Satterfield, Mrs. J. A. Tate, J. K. P. Lance, Wm. J. Worley, Geo. W. Camp, F. M. Meaders, H. B. Read, C. H. Jones, W. H. Jones, Jno. H. Jenkins, J. B. Simmons.

Ga., Dawsonville.—Official: The Farmers & Citizens' Bank of Dawsonville chartered; capital \$25,000, with \$15,000 paid in. Business is to begin January 1 with Jno. D. Walker, Sparta, Ga., president; E. McClure, vice-president, and Hoyt Brannon, cashier, both of Dawsonville.

Ga., Hamilton.—The Bank of Harris, capital \$25,000, is reported incorporated by A. F. Truett, B. J. Williams, J. R. Lunsford and J. H. Robinson.

Ga., Macon.—Official: The National Underwriting & Guaranty Co., capital \$5000 to \$80,000, is to be incorporated by Frank B. Mansfield and others. Business is expected to begin January 1. Robert W. Barnes is attorney-at-law, Macon, Ga.

Ga., Rome.—The North Rome Bank, capital \$25,000, is reported to have elected directors thus: Dr. William Delay, C. L. Wilkerson, H. E. Kelley, Bernard Hale, H. B. Brooks and John D. Walker of Sparta.

Ga., Rome.—Official: The Citizens' Building & Investment Co. chartered. Directors, J. M. Graham, president; A. Randle, vice-president; O. N. Richardson, secretary and treasurer; C. R. Porter, Barry Wright, J. M. Vandever, C. E. McLin, C. B. Gortelins, B. C. Yancey, W. M. Hardy, J. N. King, Geo. D. Pollock, E. P. Grant and D. B. Hamilton, Jr.

La., Shreveport.—Official: The Louisiana State Life Insurance Co. chartered; capital \$250,000; surplus \$287,500. W. T. Crawford, president; L. D. Prewitt and J. Homer Jordan, vice-presidents; W. E. Glassell, treasurer; Dr. Thos. P. Lloyd, medical director; John D. Wilkinson, C. W. Blair, S. S. Hunter, J. A. Bell, T. B. Gilbert, Dr. R. N. Spears, G. W. James, Dr. J. M. Middleton, Windsor Pipes and V. M. Davis. Business is to begin about January 1. Regular organization effected September 3, 1911.

Md., Baltimore.—Official: The Modern Building and Savings Association of Baltimore incorporated; capital \$250,000; Charles Berkemeier, president; J. Booker Cliff, vice-president; Ernest T. Newell, treasurer, and Geo. Riehl, secretary; Thos. C. Weeks, attorney. Business is to begin immediately; office, 609 Law Bldg.

Miss., Gulfport.—Official: The Gulfport Investment Co. chartered; capital \$30,000; incorporators, L. B. Dautler, S. A. Tomlinson, J. F. Barnes, S. F. Dupree, J. B. Howell, J. L. Taylor, D. J. Sutherland. Business is to begin immediately.

Miss., Walthall.—Gull Barber of Erwin, Tenn., proposes, it is stated, to organize a new bank.

Mo., St. Louis.—John C. Kupferle Investment Co. incorporated; capital \$100,000; organizers, Emma G. Kupferle, Rose R. Raltheil, Agnes K. Woods, Mildred E. Kupferle (Estelle K. Pittinger) of Sentralia, Ill.

Established 1835
The Merchants National Bank
 South and Water Sts., BALTIMORE, MD.
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 WM. INGLE, Vice-Pres. and Cashier.
 J. C. WANDS, Asst. Cashier.
 JOHN B. H. DUNN, Asst. Cashier.
 Capital \$1,500,000
 Surplus and Profits - \$900,000
 Deposits, \$12,000,000
 Accounts of Banks, Bankers, Corporations
 and Individuals solicited. We invite corre-
 spondence.

THE FIRST NATIONAL BANK
 OF KEY WEST, FLA.
 United States Depository and Disbursing
 Agent.
 Capital - - - - - \$100,000
 Surplus and Undivided Profits - \$40,000
 A general banking business transacted.
 Special attention given to collections.

IF
 your local financial institution cannot supply
 your needs, consult this bank regarding the re-
 quired additional facilities.
FIRST NATIONAL BANK
 RICHMOND, VA.
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 Assets over \$11,000,000.00

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 and stable Delaware laws. A fully equipped
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BANKING AND TRUST department gives
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 tees title to realty throughout Delaware.
REALTY DEPARTMENT has sites for man-
 ufacturing industries. Modern methods of
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 EDWARD T. CANBY, President.
 J. ERNEST SMITH, V.-Pres. and Gen. Counsel.
 WM. G. TAYLOR, Treasurer.
 HARRY W. DAVIS, Secretary.
 W.W. PUSEY, 2d Title and Real Estate Officer.

H. B. Wilcox, President. Blanchard Randall, V.-Pres.
 Wm. S. Hammond, Cash. Saml. W. Tachudi, A. Cash.
 R. E. Bolling, A. Cash. Raymond B. Cox, Auditor.
The First National Bank
 17 South St., Baltimore, Md.
 Capital - - - - - \$1,000,000
 Surplus and Net Profits - - 500,000
 Resources - - - - - 9,000,000
 Especially well equipped to handle the business
 of Southern Manufacturers, Corporations and
 Individuals. We invite a call or correspondence.
 1863-48 Years of Success-1911

The National Exchange Bank
 OF BALTIMORE, MD.
 Hopkins Place. German and Liberty Sts.
 Capital \$1,000,000
 July 15, 1908, Surplus and Profits \$671,631.60
OFFICERS:
 WALDO NEWCOMER, President.
 SUMMERFIELD BALDWIN, Vice-Pres.
 R. VINTON LANSDALE, Cashier.
 C. G. MORGAN, Asst. Cashier.
 Accounts of Mercantile Firms, Corporations,
 Banks, Bankers and Individuals Invited.

JOHN NUVEEN & CO.
 1st. Nat. Bank Bldg., CHICAGO
 We purchase SCHOOL, COUNTY and MU-
 NICIPAL BONDS. Southern Municipal
 Bonds a Specialty.
 Write us if you have bonds for sale.

FLORIDA TRUST CO.
 JACKSONVILLE, FLA.
 Authorized Capital, - - \$600,000
 Mortgages, Real Estate and Securities
 Bought and Sold.
 Acts as Guarantors, Trustees, Execu-
 tors, etc.

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 Railroad Securities**
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F. J. LISMAN & CO.
 Specialists in Steam R. R. Securities
 Members New York Stock Exchange,
 30 Broad Street NEW YORK
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CAPITAL AND SURPLUS - - - - - \$3,500,000
THE BALTIMORE TRUST CO.
 BALTIMORE, MD.
 Solicits Accounts of Banks, Bankers, Corporations, and Individuals
 Interest Allowed on Deposits Subject to Check.
 Special Rates Made on Time Deposits.
OFFICERS
 THOMAS H. BOWLES, President DOUGLAS H. GORDON, First V.-Pres.
 G. C. MORRISON, Second V.-Pres. SAMUEL C. ROWLAND, Third V.-Pres.
 C. D. FENHAGEN, Secretary-Treasurer

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 changed for other securities. Loans pro-
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 porations. Special attention given to securi-
 ties issued for development or extension
 purposes in the South.

Guaranty State Bank & Trust Co.
 DALLAS, TEXAS
 Capital, - - - \$400,000.00
 Surplus and Profits, 50,000.00
 Deposits, - - - 2,500,000.00
 Largest State bank in Texas. A General
 Banking and Trust Business. Ask us about our
 6% Real Estate Mortgages.

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FOR SALE Timber, Phosphate, Coal,
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 Other Properties and Investments, in
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 ENTIRE ISSUES OF BONDS PURCHASED. MERGERS FINANCED.
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Mercantile Trust and Deposit Company
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 Established 1884. Capital and Surplus, \$4,600,000
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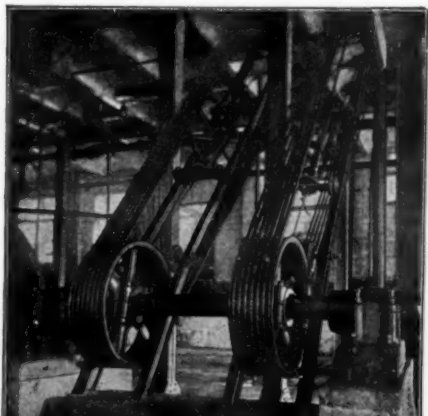
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 Transmission Rope**
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 Made of best quality
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 Largest Workers of Fibre in the World
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TRANSMISSION ROPE



Co., capital \$50,000, is reported incorporated by Susan F. Gregory, Nettie G. Miller, Thos. D. Miller, all of St. Louis; Clay Gregory of Joplin, Mo., and Columbia Wood of Ocean Park, Cal.

N. C., Magnolia.—The Bank of Magnolia, capital \$10,000, is reported to have organized with directors thus: President, J. C. Horne; vice-president, W. B. Murray; cashier, T. H. Bridgers; Theo. Middleton, M. H. Wooten, W. D. Wilkins, P. J. Heath, Thos. J. Kelly, H. D. Williams and Jos. W. Yates.

N. C., Marshville.—The Carolina Bank of Marshville, capital \$25,000, is reported chartered; organizers, A. J. Nash, Marsh Bros., and others.

N. C., Swansboro.—Reported chartered: The Swansboro Banking & Trust Co.; capital \$25,000; organizers, W. J. Moore, T. H. Pritchard and others.

N. C., Townsville.—Official: The Bank of Townsville chartered and incorporated; capital \$10,000; directors, J. J. White, president; C. W. Hargrove, vice-president; J. E. Kimball, J. H. Taylor and G. W. Marrow. Business is to begin about December 1.

N. C., Wilmington.—Reported chartered: Union Dime Savings Bank of Wilmington; capital \$125,000; incorporators, C. E. Taylor, Jr., F. W. Dick, J. Holmes Davis and J. L. Williams, all of Wilmington.

Okl., Camargo.—Official: The First State Bank of Camargo, capital \$10,000, has begun business with J. P. Thurmond, president, Elk City, Okla.; G. E. Steele, vice-president, and Phil S. Hecker, cashier, both of Camargo.

Okl., Covington.—Reported chartered: The American State Bank; capital \$10,000; incorporators, O. J. Fleming, A. E. Stephenson and Frank H. Lotson, all of Enid.

Okl., Oklahoma City.—The Amazon Fire Insurance Co., which succeeds the Western & Southern Fire Insurance Co., capital \$1,000,000, is reported incorporated by W. F. Harn, Oklahoma City; C. H. Eckford, Oklahoma City, and E. C. Stanard, Shawnee, Okla.

Okl., Oklahoma City.—Reported chartered: The Guaranty Bond & Mortgage Co.; capital \$50,000; officers, J. R. Hidy of Charlottesville, Va., president; L. G. Galland of Pontiac, Ill., vice-president; T. Myron Pyle, secretary, and George W. Fry, both of Oklahoma City, treasurer. Offices will be in the State National Bank Building. It is said the company will have Chicago and Baltimore connections.

S. C., Appleton.—Reported chartered: Bank of Appleton; capital \$15,000. Officers: W. B. Warren, president; R. H. Walker, N. M. Walker and B. Sherwood Dunn, vice-presidents, and R. H. Walker, cashier.

S. C., Winnsboro.—Reported chartered: The Winnsboro Insurance & Realty Co.; capital \$7500. Officers: John F. Davis, president; J. H. McMaster, vice-president; Frank A. Sharpe, secretary and treasurer.

Tenn., Chattanooga.—The Commercial Bank & Trust Co. is reported to have begun business with officers thus: President, C. S. Steward; vice-president, J. R. Rathmell; cashier, L. G. Browne; directors, W. H. Weatherford, W. E. Dyer, L. G. Browne, J. O. Martin, Henry Rose, Howard Mitchell, J. C. Twinam, J. M. Gager, W. P. Hays, C. S. Steward, Dr. J. R. Rathmell, P. A. Brawner, W. R. Long, J. H. Brockhaus, J. W. Gillespie, Jeptha Bright.

Tenn., Soddy.—Official: The Soddy Banking Co., capital \$10,000, is to begin business about December 1 with C. W. Abel president, T. H. McKewn vice-president and Clinton Jones cashier.

Tex., Annona.—The First State Bank of Annona, capital \$25,000, is reported organized with A. J. Martin of Clarksville, president; W. R. Garland of Annona, vice-president; F. A. Antone of Clarksville, secretary, and L. B. Pool of Avery, cashier.

Tex., Dickinson.—Official: The Dickinson State Bank chartered; capital \$10,000; incorporators, John P. Atkinson and J. M. Alford, League City, Tex.; John Sealy, George Sealy and Sealy Hutchings of Galveston, Tex. Business will soon begin.

Tex., Mission.—Reported chartered: First National Bank of Mission; capital \$25,000; J. C. Hardison, president; Chas. Volz, vice-president; C. F. Goodenough, Jr., cashier.

Tex., LaRue.—The Citizens' State Bank of LaRue is reported chartered; capital \$10,000. Incorporators, D. R. Murchison, J. W. Murchison, J. W. Murchison, G. F. Rigester and others.

Tex., Waco.—The Dilworth Title Guaranty Co., capital \$55,000, is reported to have filed application for a charter; incorporators, T. M. Dilworth, T. G. Dilworth and A. L. Dilworth.

W. Va., Wheeling.—Official: The Farmers

& Producers' Investment & Securities Co. of Wheeling, capital \$100,000, is to begin business November 1 with Friend Cox president and treasurer.

NEW SECURITIES.

Ala., Andalusia.—October 24, it is reported, an election is to be held to vote on \$63,000 of light and water-plant bonds.

Ala., Anniston.—Official: The election on the question of issuing bonds in Calhoun county for good roads, which was previously called to be held on November 15, has been recalled and will not be held. I. E. Watson is Clerk Circuit Court.

Ala., Brewton.—November 14, it is reported, an election is to be held in Escambia county to vote on \$100,000 of road bonds.

Ala., Decatur.—The question of issuing \$50,000 of bonds for electric-light plant is reported under consideration.

Ala., Decatur.—Spitzer, Rorick & Co., Toledo, O., are reported to have purchased \$20,000 of 5 per cent. 25-year New Decatur school bonds.

Ala., Monroeville.—Reported that an election will soon be held to vote on \$7300 of 5 per cent. high-school building bonds.

Ala., Tuscaloosa.—Official: October 23 an election is to be held to vote on \$35,000 of 5 per cent. 30-year school bonds; denomination \$500. Address S. Friedman.

Ark., Blytheville.—Official: L. W. Thompson, St. Louis, Mo., purchased \$25,000 of 5½ per cent. bonds at \$97.75 per hundred, purchaser paying all expenses; denomination \$500; dated July 1, 1911; maturity \$1090 a year until all mature. J. G. Sudbury is secretary School Board.

Ark., Heber Springs.—Press dispatches state that school bonds will soon be placed on the market.

Fla., Brooksville.—Official: Bids are being received by the Town Clerk for \$16,000 of town bonds; denomination \$100.

Fla., Pensacola.—The Fifth-Third National Bank, Cincinnati, is reported to have been awarded \$254,000 of 4½ per cent. 30-year refunding bonds.

Fla., Vernon.—December 12, it is reported, an election is to be held in Washington county to vote on \$350,000 of road-improvement bonds.

Fla., West Tampa, P. O. Tampa.—The \$100,000 of public-improvement bonds voted August 18 are reported to have been purchased by Rudolph Kleybolte Company, Inc., Cincinnati.

Ga., Albany.—Y. C. Rust, City Clerk, writes that the City Council rescinded its action with reference to advertising the \$100,000 of 5 per cent. 30-year municipal improvement bonds and receiving bids on November 15, 1911, and sold the bonds at private sale October 10, 1911, to the Exchange Bank and the Citizens' First National Bank of Albany at 103.750. Bonds are dated November 15, 1911. Denomination \$1000.

Ga., East Point.—Reported defeated: \$50,000 of improvement bonds.

Ga., Lagrange.—Official: An election is to be held to vote on \$175,000 of 4½ per cent. water and school bonds. Dated 1912; denomination \$500 and \$1000.

Ga., Quitman.—An ordinance is to be introduced in the City Council providing for an election to vote on \$40,000 of school, \$23,000 of paving and \$12,000 of fire department bonds.

Ga., Parrott.—Official: An election was held in Terrell county October 14 to vote on \$6000 of 6 per cent. schoolhouse bonds; dated January 1, 1912. W. M. Dunn is Mayor, and S. J. Carter, clerk.

La., New Iberia.—Press dispatches state that good-roads bonds are to be issued and that banks of Jeanerette and New Iberia will take them.

La., Ruston.—Reported that an election is to be held to vote on sewerage plant bonds.

Md., Cumberland.—Official: Bids will be received until 8 P. M. October 23 for \$100,000 of 4½ per cent. water-improvement bonds; denomination \$1000; dated October 1, 1911; maturity October 1, 1941. Address Roderic Clary, Commissioner of Finance and Revenue.

Md., Towson.—An election is to be held in Baltimore county to vote on \$1,500,000 of road bonds.

Miss., Bay St. Louis.—Bids will be received until noon November 1 by W. W. Stockstill, clerk Board of Supervisors, for \$25,000 of 6 per cent. road and bridge bonds.

Miss., Meridian.—November 14, it is reported, an election is to be held to vote on \$50,000 of bonds for providing rights of way

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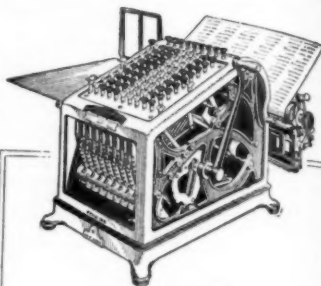
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Miss., Vicksburg.—According to press dispatches, an election is to be held to vote on water-works-plant bonds.

Mo., Excelsior Springs.—Official: Bond issue defeated.

Mo., Canton.—Official: The Farmers' National Bank of Warsaw, Ill., purchased on September 25 at \$10,040 and printing, \$10,000 of 5 per cent. 10-year water-works extension bonds. Denomination \$500; dated August 15, 1911; maturity, serial \$5000 in 10 years.

Mo., Columbia.—The \$100,000 of bonds of Columbia special road district are reported to have been purchased by G. H. Walker & Co. of St. Louis, Mo.

Mo., Jefferson City.—H. S. Hadley, president Board Fund Commissioners, will receive bids until noon December 1, it is reported, for \$2,500,000 of 3½ per cent. Missouri State Capitol building bonds; denomination \$1000; dated January 1, 1912.

Mo., Kirkwood.—Official: Election to vote on school bonds postponed indefinitely. C. A. Lawton is secretary School Commissioners.

Mo., St. Louis.—Official: The \$1,700,000 of 4 per cent. 20-year renewal water-works bonds were awarded on October 12 as follows: German Savings Institution, \$200,000 at 1000.75; Wm. R. Compton & Co. and A. G. Edwards & Co., \$290,000 at 1000.51; Mississippi Valley Trust Co. and St. Louis Union Trust Co., \$1,200,000 at 1000.75; W. B. Thompson, trustee, \$400 at 1010. Bonds are dated November 1, 1911; maturity November 1, 1931; denomination \$1000. Frederick H. Kreisman is Mayor and B. J. Faussig Comptroller.

N. C., Selma.—Bids will be received by Jno. A. Mitchener, Mayor, until November 15 for \$20,000 of 6 per cent. 20-year bonds for electric light, water system, fire protection and other municipal improvements.

N. C., Shelby.—Notice is given that an election is to be held December 5 to vote on \$55,000 of 5 per cent. 15-year electric light bonds. J. F. Tiddy is Clerk.

Okla., Braggs.—Official: Bids will be received until 8 P. M. October 24 for \$20,000 of water-works bonds. Address J. J. Johnson, Clerk.

Okla., Bighart.—Reported voted: \$50,000 of road-improvement bonds.

Okla., Bristow.—Official: Voted September 25: \$20,000 of refunding warrants and water-works extension bonds. G. S. Carman is Mayor.

Okla., Lawton.—Bids will be received until 8 P. M. October 30, it is reported, by the City Clerk for \$70,000 of 5 per cent. 25-year funding bonds.

Okla., Muldrow.—F. R. Stone, Lima, O., is reported to have been awarded the \$23,000 of 6 per cent. 25-year water and light bonds at \$90 premium. E. A. Miller is Clerk.

Okla., Muskogee.—An election is to be held in Muskogee county November 16 to vote on \$300,000 of courthouse bonds.

Okla., Oklahoma City.—According to press dispatches, an election is soon to be held in Oklahoma county to vote on \$1,250,000 of road bonds.

Okla., Oklahoma City.—Press dispatches state that R. J. Edwards, as attorney, has been appointed to dispose of \$150,000 of bonds for funding outstanding warrant indebtedness.

Okla., Olustee.—Reported voted: \$20,000 of water-works bonds.

Okla., Pawhuska.—Official: November 14 an election is to be held in Osage county to vote on \$100,000 of 5 per cent. 20-year bonds to purchase site and build courthouse and jail; dated November 15, 1911; maturity November 15, 1931. W. J. Boone is County Clerk.

Okla., Pryor Creek.—Reported voted: \$70,000 of water-works extension and \$10,000 of sewer extension bonds.

Okla., Sapulpa.—October 24, it is reported, an election is to be held in Creek county to vote on \$125,000 of road bonds.

Okla., Strikeax.—An election is soon to be held in Strikeax township, Osage county, it is reported, to vote on \$50,000 of road-improvement bonds.

S. C., Johnston.—Reported defeated: \$20,000 of water-works bonds.

Tenn., Gainesboro.—Official: An election is to be held in Jackson county December 2 to vote on \$150,000 of road bonds.

Tenn., Decaturville.—An official letter confirms report that an election is to be held in Decatur county November 25 to vote on \$100,000 of road bonds. O. H. Roberts is Clerk County Court.

Tenn., Gallatin.—December 23, it is reported, an election is to be held in Sumner county to vote on \$200,000 of road bonds.

Tenn., Madisonville.—An official letter confirms report that \$300,000 of Monroe county

road bonds have been authorized. C. A. Lowry is secretary, Monroe County Pike Commission.

Tex., Alamo Heights, P. O. San Antonio.—Reported that \$25,000 of bonds of Alamo Heights School District are to be issued.

Tex., Alice.—Official: October 21 an election is to be held to vote on \$55,000 of 5 per cent. 40-year Jim Wells county courthouse bonds. W. R. Perkins is County Judge and G. W. Savage County Clerk.

Tex., Amarillo.—November 4, it is reported, an election is to be held in Potter county to vote on \$40,000 of courthouse and jail bonds.

Tex., Austin.—The Attorney-General has approved securities as follows: \$10,000 of 5 per cent. 10-40-year Marlin street-improvement bonds; \$2000 of 5 per cent. 20-year Anderson county common school district No. 23 schoolhouse bonds; \$2000 of 5 per cent. 10-20-year Erath county common school district No. 1 schoolhouse bonds; \$23,000 of 5 per cent. 10-40-year Zavala county road and bridge bonds; \$48,000 of 5 per cent. 10-40-year Corpus Christi public wharf bonds; \$1000 of 5 per cent. Tom Green common school district bonds; \$50,000 of 5 per cent. 20-40-year Corpus Christi independent school district bonds; \$10,000 of 5 per cent. 5-40-year Crockett independent school district bonds; \$400 of 5 per cent. 2-10-year bonds of Shackelford county common school district No. 15; \$1000 of 5 per cent. 20-year bonds of Houston county common school district No. 19; \$15,000 of 5 per cent. 2-10-year bonds of Dimmit county common school district.

Tex., Bonham.—The Commerce Trust Co., Kansas City, is reported to have purchased \$100,000 of street-improvement and \$30,000 of water-works 5 per cent. 20-40-year bonds.

Tex., Cameron.—Thomas J. Boiger & Co., Chicago, are reported to have purchased \$18,500 of bonds of Hefley improvement district of Milan county at \$19,156.25.

Tex., Dallas.—Press dispatches state that on November 18 an election is to be held to vote on \$1000 of bonds of Wheatland School District No. 18.

Tex., Dallas.—Official: Bids will be received until 11 A. M. November 1 for \$500,000 of 4½ per cent. Dallas county road and bridge bonds, Series 3; denomination \$1000; dated September 10, 1911; maturity September 10, 1951, redeemable any time after ten years from their date. Address John L. Young, County Judge.

Tex., El Paso.—The Commercial Bank & Trust Co., Kansas City, is reported to have purchased \$814,000 of refunding and school bonds. C. W. Fassett is City Clerk.

Tex., Goliad.—The question of issuing Go-

lad county road bonds is reported under consideration.

Tex., Harlingen.—Reported voted: \$32,000 of 5 per cent. 20-40-year water, light and street-improvement bonds. Address A. W. Cunningham at Harlingen.

Tex., Houston Heights.—Reported voted: \$180,000 of 5 per cent. 30-40-year street and boulevard bonds. D. Barker is Mayor.

Tex., Kountze.—Hardin county is reported to have voted \$160,000 of road bonds.

Tex., Laredo.—Reported that \$30,000 of 5 per cent. 20-40-year school bonds are being offered for sale.

Tex., Lexington.—Steps are being taken, it is reported, to hold an election to vote on \$100,000 of road bonds.

Tex., Orange.—An official letter says that \$143,000 of 5 per cent. 10-40-year Orange County Navigation District bonds have been sold at par and accrued interest, 2 per cent. commission.

Tex., Palestine.—An election is to be held in Justice Precinct No. 1, Anderson county, on November 11 to vote on \$150,000 of road bonds. O. C. Funderburk is County Judge.

Tex., Pecos.—An election is to be held in Reeves county, it is reported, to vote on \$200,000 of road bonds.

Tex., Saint Jo.—Reported voted: Water-works improvement bonds.

Tex., Wallisville.—An election is to be held in Wallisville precinct No. 1, Chambers county, to vote on \$6000 of bonds.

Tex., Wichita Falls.—Reported voted: \$150,000 of road bonds of Precinct No. 1, Wichita county. Address C. B. Felder, County Judge.

Va., Colonial Beach.—Official: Bids will be received until noon November 9 for \$37,000 of 6 per cent. 25-year municipal improvement bonds; denomination \$500; dated November 9, 1911; maturity November 9, 1936. H. W. B. Williams is Mayor, and J. O. Heflin, Clerk.

Va., Lawrenceville.—Official: Bids will be received until noon October 31 for \$25,000 of the \$50,000 issue of 5 per cent. 20-30-year water, sewerage and electric-light systems bonds voted August 1, 1911; denomination \$1000. Address J. W. Upchurch, Town Clerk.

Va., Leesburg.—An election is to be held November 14, it is reported, to vote on \$20,000 of water and sewer bonds.

Va., Spottsylvania.—Official: November 7 an election is to be held to vote on \$30,000 of Berkeley and \$50,000 of Livingston district 5 per cent. Spottsylvania county permanent road improvement bonds. Denomination \$100, \$500 and \$1000; dated about January, 1912. T. A. Harris is Clerk.

W. Va., Cairo.—Reported voted: \$30,000 of high-school bonds.

W. Va., Mannington.—Official: Defeated: Water-works improvement bonds. J. R. Burk is Mayor.

W. Va., New Cumberland.—Reported voted: \$125,000 of Hancock county road-improvement bonds.

At Braggs, Okla., bids will be received until 8 P. M. October 24 for \$20,000 of water-works bonds. Further particulars will be found in the advertising columns.

Brooksville, Fla., is offering for sale \$16,000 of improvement bonds. Further particulars will be found in the advertising columns.

At Colonial Beach, Va., bids will be received until noon November 9 for \$37,000 of 6 per cent. 25-year water-works improvement bonds. Further particulars will be found in the advertising columns.

At Kingstree, S. C., bids will be received until noon November 11 for \$28,000 of water-works and \$14,000 of sewer 5 per cent. 20-40-year bonds. Further particulars will be found in the advertising columns.

FINANCIAL NOTES.

The Bank of Sasakwa, at Sasakwa, Okla., is reported to have increased its capital from \$10,000 to \$15,000.

The Bank of Eudora, at Eudora, Ark., according to press dispatches, has filed a certificate increasing its capital from \$15,000 to \$25,000.

The Merchants' National Bank of Winston-Salem, N. C., according to press dispatches, is doing business in its new quarters on Liberty St.

The Western & Southern Fire Insurance Co., Oklahoma City, Okla., is reported to have changed to the Amazon Fire Insurance Co. of Oklahoma City; capital \$1,000,000.

Louis B. Magid announces the organization of Louis B. Magid & Co., investment bankers, with offices 101-34 Candler Bldg., Atlanta, Ga., for the purpose of dealing in high-grade investment securities, including municipal, State and Government bonds.

The Citizens' Bank of Augusta, Ga., according to press dispatches, has concluded negotiations with the Interstate Trust Co. of Alken, S. C., for consolidation of the two banks under the name of the Citizens Trust Co. with \$100,000 capital. The business of the Alken bank will be transferred to Augusta. The Citizens' Trust Co., in addition to doing a general banking business as heretofore, will amend their charter and add the functions of a trust company.

REORGANIZATION AND MERGER

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SOUTHERN IRON & STEEL COMPANY

and Certificates for Shares of Preferred and Common Stock of

ALABAMA CONSOLIDATED COAL & IRON COMPANY

The undersigned, who heretofore constituted separate Committees, one for the reorganization of Southern Iron & Steel Company and its merger with Alabama Consolidated Coal & Iron Company, and the other to represent the security-holders of Southern Iron & Steel Company, have now agreed upon a plan and have accordingly merged, forming the undersigned Committee.

It is the unanimous judgment of the members of the Committee, as a result of investigations of the properties of both Companies, that they will both be largely benefited by the proposed merger and that the basis of consolidation is just to all interested security-holders.

The Plan thus agreed upon has already received the approval of holders of large amounts of securities of both Companies of all classes, and has been lodged, together with an Agreement dated October 11, 1911, under which securities may be deposited with **BANKERS TRUST COMPANY** (the Depositary under the Plan and Agreement), No. 7 Wall Street, in the City of New York; copies of the Plan and Agreement may be had on application to the Depositary, or to the Secretary of the Committee.

Holders of the securities above mentioned are hereby invited to deposit their securities under the Plan and Agreement. **IMMEDIATE CONCERNED ACTION IS ESSENTIAL** to the preservation of the rights of those interested in the properties, and, for that reason, the time for the deposit of securities is limited to **NOVEMBER 6, 1911**, after which date no securities will be received, except in the discretion of the Committee and upon such terms as it may approve. Bonds, debentures and notes must be deposited in negotiable form, the bonds with the coupon due April 1, 1911, and all subsequent coupons attached, the debentures with the coupon due February 1, 1911, and all subsequent coupons attached, and the notes with the coupon due April 1, 1911, and all subsequent coupons attached. The notes must be accompanied by the bonds pledged to secure them bearing the coupon maturing April 1, 1911, and all subsequent coupons attached. Certificates for stock must be properly endorsed for transfer and duly stamped.

The Depositary will issue to all depositors certificates of deposit transferable by assignment.

Dated New York, October 11, 1911.

SAMUEL UNTERMYER,
ALBERT RATHBONE,
Counsel.

A. M. WICKWIRE, Secretary,
37 Wall Street, New York.

CECIL A. GRENFELL, Chairman;
ALEXANDER J. HEMPHILL,
EDWIN G. MERRILL,
JOHN W. PLATTEN,
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HARRY BRONNER,
NEVILLE G. HIGHAM,
H. H. MELVILLE,
S. H. VOORHEES,
Committee.

Classified Opportunities

MEN WANTED

WANTED—Traveling or local men; all sections of the country; profitable side line; commission or salary; good men average \$100 weekly. For particulars address The Sun Chemical Company, Richmond, Va.

SALES AGENTS to sell feed-water heaters, evaporators, condensers and other power-plant equipment; guaranteed territory; commission. Address Fisher, 90 West St., New York City.

AGENTS, DON'T SLAVE FOR WAGES. Earn \$5 to \$25 daily. Be your own boss. We will show you how. Particulars free. Whitfield & Co., Sabot, Va.

WANTED—Real salesmen acquainted with building and contract work to handle concrete mixers. The American is a batch mixer giving a perfect mix either wet or dry. It is sold under a liberal commission arrangement without requiring any financial investment by the agent. A good seller in other sections and should prove attractive in the South with pushing. Address Cargill Mfg. Co., 567 Buttles Ave., Columbus, O.

AGENTS WANTED to sell lubricating oils, belts, hose, paint, varnish, to contractors, auto owners, mills, factories, etc. Exclusive territory to right party. Oil experience unnecessary. Manufacturers' Oil & Grease Co., Cleveland, Ohio.

HANDLE AND SPOKE FACTORY wants services of an experienced foreman at once, familiar with Olsen and Dedance lathes. Give reference in first letter. Address Lock Box No. 26, Kenbridge, Va.

WANTED—Party with \$30,000 to \$40,000 to invest in a woodworking plant in Northern Alabama, good opportunity; will bear fullest investigation; plant now in operation; healthy, delightful climate; prefer man to take active part; write for full particulars. Address No. 87, care Manufacturers Record.

CIVIL ENGINEER that has had experience in reinforced concrete construction and can do estimating to enter into partnership with experienced and established contractor with capital and good line of credit; must be able to give first-class reference as to ability and sobriety. Address Geo. E. Reeder & Co., San Antonio, Tex.

WANTED—At once, good draughtsman, surveyor and civil engineer who wants to connect permanently with large industrial corporation; must become a stockholder in company and serve as confidential man. Give full particulars and references in first letter. Address Manager, Office 711-68 Hudson St., Hoboken, N. J.

EXPERIENCED calendar salesman for Georgia, to sell the best and most complete line comprising calendars, fans, leather and miscellaneous novelties. Well-rated established house will make a liberal contract with exclusive territory for 1912 and advance expense money to men of experience with clean records. State past experience and full particulars. Our men average \$50 to \$75 weekly. Address Dept. M, P. O. Box 578, Chicago, Ill.

WANTED—A charcoal iron blast furnace located south of the Ohio River will soon require services of an experienced founder. If position is desired by one with full knowledge of blast-furnace practice, give reason for change. Address No. 861, care Manufacturers Record.

WANTED—Five first-class, experienced electrical supply salesmen for Alabama, Texas, Oklahoma, Arkansas, Georgia; give references; state age; will pay good salary to competent men. Address Jobber, P. O. Box 201, New Orleans, La.

WANTED—Associate with capital in construction business in Southwest; good opportunity for energetic party in business that is now paying good profits, but which will permit of considerable enlargement. Address No. 869, care Manufacturers Record.

WANTED—Man as manager of factory making implements, gas engines, rig irons, etc., who can invest \$5000 to \$10,000; good references required. Address Box 1922, Okmulgee, Okla.

WANTED—Partner in established real estate business; live town; country developing rapidly; experienced man preferred. Don't answer unless you have the money and mean business. Address P. O. Box 53, Russellville, Ark.

AGENCIES WANTED

MANUFACTURERS' AGENT would represent out-of-town concerns in New York and vicinity or give entire time to one line; large experience; best references as to character; have good showroom. Address M. L. B., care Manufacturers Record, 52 Broadway, New York.

SITUATIONS WANTED

ENGINEER who recently constructed hydro-electric power development will be open for engagement soon. Address No. 857, care Manufacturers Record.

A CORNELL GRADUATE of nine years' business experience wants a position with reliable manufacturer, mechanical line preferred; can invest \$5000 or \$10,000 after services are tried and proven satisfactory. provided investment is a paying one. Address No. 875, care Manufacturers Record.

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 24 lines. Allow seven words per line. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year, as follows: 100 lines, 18c. per line; 300 lines 16c. per line; 500 lines or more, 15c. per line.

WANTED—Connection with responsible corporation (mining or manufacturing preferred) as secretary, treasurer, office manager or auditor by gentleman with extensive experience and highest references; open for engagement October 15. Address No. 832, care Manufacturers Record.

POSITION WANTED—Experienced accountant and general office man desires to change location; thoroughly familiar with the Southern territory; can take charge of shipping and handle correspondence. L. B. Holliday, 337 Vine street, Chattanooga, Tenn.

GENTLEMAN of wide experience as general manager of industrial enterprises, having successfully completed two very large developments in the South, is now open for a proposition; have experience in hydro-electric development and also in building industrial towns and handling additions to cities. Address No. 872, care Manufacturers Record.

AN EXPERIENCED commercial secretary, now employed, desires change; best of reasons; ten years' railroad experience, including four years traveling; familiar with every department; legal, newspaper and publicity experience; very best references as to general standing and result-producing ability. Address No. 876, care Manufacturers Record.

ATTORNEY with extensive office experience would like to connect himself with some mercantile firm where he could look after collections and credits. Address No. 868, care Manufacturers Record.

A HIGH-GRADE machinery and supply salesman will be open for position to handle Southern territory; ten years' experience; can produce business; satisfactory reference. Address No. 874, care Manufacturers Record.

WANTED—Position by young man now employed by mill-supply house as salesman, with some manufacturing in kindred line; desire to devote my energy and talent to some one line; can change January 1; am single and will go anywhere, but prefer Western territory; am sober and industrious and can furnish references; will only consider place with reliable house. Address No. 866, care Manufacturers Record.

YOUNG MAN, thirty years of age, who has had five years' experience as traveling salesman, desires position as sales manager, district sales manager or salesman for some good manufacturing concern where there is chance for promotion; Birmingham, Alabama, district preferred, as have been connected in that district all the time; do not drink intoxicating liquors of any form and can furnish the very best of references. Address No. 856, care Manufacturers Record.

HAVING been consistently successful as a traveling salesman, department manager and sales manager, I am seeking a connection with some firm of high standing wishing representation in the South. I am at present very desirably situated, but find the possibilities much limited. If you are looking for a capable, energetic young man who can and will properly look after your interests, and you can offer something permitting of unlimited expansion, I would appreciate hearing from you. Box 1339, New Orleans, La.

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RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.—Courses in Civil, Mechanical and Electrical Engineering, and General Science, leading to the degrees of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.) and Bachelor of Science (B.S.). Special courses in engineering and science. Splendidly equipped new engineering laboratories. Send for catalogues to Registrar.

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COMMERCIAL STATE BANK, Birmingham, Ala. State depository. Prompt attention to Alabama collections.

THE PALMETTO NATIONAL BANK, Columbia, S. C. capital \$250,000, solicits accounts of banks, firms, corporations and individuals, either commercial or savings accounts.

HOTEL FOR SALE

HOTEL FOR SALE—One of the finest hotels on the Galveston Beach, consisting of 30 rooms, with modern conveniences; all car lines pass the hotel; one block from the popular bathhouses; surrounded by all the beach amusements. This hotel faces the Gulf of Mexico, located on the Galveston beautiful boulevard, has an elevation of 22 feet above the gulf, has the reputation all over the State of Texas as one of the best hotels in Galveston. Here is an opportunity for a good hotel man. Galveston Beach is growing more popular every year. Write for further particulars. J. L. Boddeker & Co., Agents, 410 20th St., Galveston, Texas.

CAPITAL WANTED

AN INVESTMENT OPPORTUNITY—A manufacturer in a bustling Southern town, producing a high-grade line of goods for which there is a steady demand, wishes to raise more capital to better develop his already well-established, well-paying business. A bond issue is considered of \$25,000, guaranteeing 6 per cent., secured by a first lien on all real estate and personal property. This plant was started with a capital of less than \$5000 by the present operator and owner five years ago, and has never been shut down a day for lack of orders. This business shows a valuation of over \$39,000 by a recent audit. The owner wishes to negotiate with parties who will consider the purchase of the bonds, or, if they prefer, preferred stock. Complete information can be obtained of M. V. Richards, Land and Industrial Agent, Southern Railway, Room 52, Washington, D. C.

TO EXTEND A RAILROAD now operating 17 miles; good bonus offered for extensions; best agricultural country; 5000 bales cotton this season; timber and coal in abundance. Write for particulars. Address No. 877, care Manufacturers Record.

WANTED—Capital to develop the most modern cotton-gin investment, which has been tested and proven a saving of \$5 a bale on staple 30 pounds of lint per bale; gin capacity, bale in 40 minutes. It is being operated this season and is a great success. Polk Real Estate Co., 162 Louisiana St., Little Rock, Ark.

WANTED—Money to handle at good rate of interest; first-class security furnished; can handle \$25,000 or more on best real estate security; will guarantee 7 per cent. interest clear to lender; will give Security National Bank for reference; money will be handled through that bank. Write J. K. Green, Mayor of Dewey, Okla.

BUSINESS OPPORTUNITIES

FACTORIES LOCATED, factory buildings in the principal cities to rent, factories, saw-mills, flour mills, warehouses, real and personal property sold or exchanged. Timber, grazing and farm lands sold or exchanged. Properties cared for, rents collected. Office space, desk rooms and Chicago addresses arranged for. High-class manufacturing stocks and bonds for sale and exchange. Offer what you wish to sell, inquire for what you wish to buy. Negotiations confidential. Business promptly executed. Correspondence invited. Kreiss & Company, 167 W. Washington street, Chicago, Ill.

FOR SALE—Active interest and position in old-established plumbing and heating business in a live city; \$2000 cash necessary. Address J. H. Grogg, Parkersburg, W. Va.

MANUFACTURERS producing articles of merit suitable for the mail-order trade will please send information and catalogues to Box 41, Jacksonville, Fla.

IF YOU KNOW any ambitious, tolerably well educated young or middle-aged man who is making less than \$3000 a year and would like to make from \$3000 to \$5000, kindly tell him to write for a circular to The School of City Advertising, Knickerbocker Building, Baltimore, Md.

YOU CAN BUY CHEAP, on account of owner's ill-health, a well-known and popular summer resort in the mountains of Virginia; very successful season this year; water has wide reputation for its medicinal qualities; property contains 340 acres, about half in timber and balance in grass; 2½ miles from one railroad and only ½ mile from another; splendid opportunity for the right party. Price \$32,500; easy terms. Address Box 102, Richmond, Virginia.

GREAT opportunity for manufacturing plant in one of the best towns in the South; on main line of two great railroads; unexcelled water power; something new; \$10,000 will pay handsome dividends from the start and will increase yearly. Write quick to R. B. Brown, Callahan, Fla.

FOR SALE OR TRADE in cash or exchange for first-class black farming land, electric light and power plant, newly equipped with modern up-to-date automatic steam and electrical machinery, line construction and complete system of operation in growing town of 3500 population, together with five franchises for long-distance transmission of electrical energy into surrounding towns, proposed bonuses, etc.; value \$50,000, and gross income about \$12,000 per annum; health demands change is reason of desire to sell or trade. Address Judge W. E. Spell, Asst. Atty.-Genl. Texas Central R. R. Co., General Offices, Waco, Tex.

MAPS AND BLUE PRINTS

MAPS OF TEXAS COUNTIES—We make blueprint maps of nearly all Texas counties and several Louisiana parishes. Write for prices on those desired. Singleton Bryan & Co., Beaumont, Texas.

HOUSE TRIM

WE MAKE ALL KINDS OF HOUSE TRIM. Mouldings a specialty. Can furnish in carload lots. Write for prices. Camp-Jones Mfg. Co., Panama City, Fla.

TYPEWRITERS

TYPEWRITERS—Remington and Smith Premier; latest models; fully guaranteed; ¼ to ½ original price; no agents; write us; save commissions. Standard Writing Machine Co., Washington, D. C.

IF YOU are interested in purchasing a high-grade typewriter and no one care to invest \$100 asked by the manufacturers, we would like you to investigate our remanufactured machines. Three days' trial allowed. Enterprise Exchange, Inc., 99 E. Baltimore street, Baltimore, Md.

LOCATIONS SECURED

I CAN FIND YOU A LOCATION for your sawmill or slack-barrel stove factory. Write for particulars of my plan and tell me about what you want. Jo A. Parker, Parma, Mo.

FACTORY SITES

FREE SITES and other liberal assistance; cheap fuel; natural gas, oil, coal and abundant water; six railroads. Address Chamber of Commerce, Wichita Falls, Texas.

INDUSTRIES WANTED

STEEL BOLT, NUT AND RIVET FACTORY—STEEL BOLT, NUT AND RIVET FACTORY WANTED—An excellent opportunity is now open in a Southern State for an experienced manufacturer with some capital to locate such a factory. A similar plant in the South does not today exist. The home market is large, but must depend entirely upon shipments from far-distant Northern cities. Cost of manufacture is lowest in the country. Steel, coal and low-priced power to be had near at hand. Intelligent labor easily obtained at reasonable wage scale. City offers exemption from taxation for term of years. For further information refer to File No. 22508 and address M. V. Richards, Land and Industrial Agent, Southern Railway, Room 52, 1320 Penn. Ave., Washington, D. C.

MISCELLANEOUS

LAREDO, TEXAS, wants a tourist hotel, cement factory, up-to-date educational institution, down-the-river railroad. Laredo has cheap fuel, coal and natural gas, equable climate, abundant water, cheap labor. Address Secretary Board of Trade.

CLEVELAND, TENN., WANTS YOU.—The best town in the Southeast, with a hydro-electric development of 32,000 initial horsepower for manufacturing purposes, final development 82,000 horsepower. Free manufacturing sites; exemption from city and county taxes; ample railroad facilities; the spring water pumped to all parts of the city; cheap raw materials; fine farming and trucking roads in country; fine utilities; cheap white labor; best of public utilities; cheap water; cotton mill, furniture factory and brick-manufacturing plant; good climate; most rapidly developing city in the Southeast. Write Commercial Club, Cleveland, Tennessee.

VICTORIA, TEXAS, head of navigation of Guadalupe River; center of cotton, corn, truck and citrus fruit-growing district of South Texas; country rapidly developing; opportunities for many industries. If interested in the coastal section of Texas, write for booklet "D" to the Secretary of the Progressive League.

SUFFOLK—The best manufacturing and distributing point in Virginia; six railroads and water transportation; plenty of labor; cheap fuel; electric power; seventy manufacturing plants in successful operation; opportunity for furniture and woodworking plants and any wholesale, jobbing or manufacturing business; center of tidewater; richest farming section to be found; healthy; excellent schools and churches; filtered water, gas and sewer. Write Board of Trade, Suffolk, Va.

"BUSIEST AND BEST BUILT CITY IN TEXAS"—Wichita Falls possesses unsurpassed natural resources for investment. Offers exceptional opportunities for investors: free sites for manufacturing establishments; cheap fuel; natural gas, oil, coal, electricity and abundant water from the largest body of water in Texas; six railroads; raw material at hand; latest approved public utilities; creosoted wood block pavement throughout business section; over fifty miles concrete sidewalks. Handsome developing city in Southwest. Handsome booklet and detailed information upon request. Address Chamber of Commerce, Wichita Falls, Texas.

DEWEY, OKLAHOMA, people want to furnish cheap gas and a free site to any good manufacturing plant, whether great or small, that will come to their city. Two small, that will come to their city. Two good lines of railroads and good prospects have large cement plant now turning out 3000 barrels of cement per day. Fine farming country all around. Large gas and oil field. Write J. K. Green, Mayor of Dewey.

Classified Opportunities

WANTED.—Asheville, N. C., 31,000 population, including suburbs; 38 miles paved streets; best water on earth; men with capital to invest in money-making enterprises; good opening for manufacturing enterprises. Write Board of Trade.

INDUSTRIAL PLANTS FOR SALE

FOUNDRY, MACHINE, SASH AND BLIND FACTORY
FOR SALE OR LEASE.—Foundry, machine, sash and blind factory, located in the heart of Salisbury, N. C.; also 184 acres timber land, located on R. R. near Whitney, N. C. Address Box 186, Salisbury, N. C.

SAW AND PLANING MILL

FOR SALE.—Complete saw and planing mill in operation; 8,000 acres land; estimated stumpage, 12,000,000 pine, 3,000,000 cypress; labor conditions good; favorable freight rates; splendid colony proposition; reasonable terms can be arranged. For schedule address Granville Real Estate & Trust Co., Oxford, North Carolina.

STOVE FOUNDRY

STOVE FOUNDRY FOR SALE.—Without reserve we will sell to the highest bidder on November 2, 1911, at Dalton, Ga., our entire plant. A rare chance to invest about \$15,000 and get one of the best foundries in the South. Satisfactory reasons given for selling. Don't miss this sale. Mascot Stove Mfg. Co., Dalton, Ga.

MANUFACTURING PLANT

In the best manufacturing city west of the Mississippi River; population 40,000; four trunk lines of railroad; two branch lines; two interurban lines; best railroad facilities in the State; building, brick and stone; two stories and large basement; facing two streets; alley in rear; railroad switch on other side; bargain if taken soon; good terms. Write for full particulars to the Northwestern Land Company, Over 213-215 First Avenue, Cedar Rapids, Iowa.

FLOUR AND GRIST MILL

A BARGAIN FOR QUICK PURCHASER.—A flour and grist mill, capacity 20 barrels per day; water and steam power; three-story mill; mill works new; twenty acres of land improved by a seven-room house; water at door; part of land in good state of cultivation; mill property at junction of five roads; two miles from railroad station; quality of flour very good and in good demand; neighborhood first class. Address George L. Stockdale, Trustee for C. H. Van Cleef and wife, Westminster, Md.

ROTARY VENEER PLANT

WANTED.—A buyer for rotary veneer plant; 1½ acres land, office, factory and storage buildings, complete, with side track; good timber; good railroad facilities; can be had at a bargain. Address Gilkey Veneer Co., Marion, N. C.

STEAM LAUNDRY

FOR SALE.—Steam laundry in growing South Florida town, doing a good business, in a large and rapidly developing territory. Address Owner, Box 125, Clearwater, Florida.

FLOUR MILLS

TWO daily 60 and 75 barrel operating flour mills for sale, located near Western Maryland; both in excellent wheat belts. Arthur W. Fastie, 124 W. 25th St., Baltimore, Md.

MINERAL AND TIMBER LANDS WATER POWERS AND MISCELLANEOUS PROPERTIES

READ the bargain offered in "Business Opportunities" of summer resort with 340 acres, situated in the mountains of Virginia.

WRITE HELLBERG & BLAIR, 418 Roberts-Banner Bldg., El Paso, Texas, for information about business opportunities of all kinds and investments in town lots in the new town of Columbus, situated in the wonderful Lower Mimbres Valley, New Mexico, 74 miles west of El Paso, on the El Paso & Southwestern R. R. Pure soft shallow water for irrigation. Free Government land. Patented land at from \$15 to \$35 per acre.

RESIDENCE LOTS AND SQUARES, unimproved, inside development section; railway factory sites; New Orleans. Prices at low level now. Grasp your opportunity. Timber, farms, cut-over land, mineral land, townsites and additions, Northwest Louisiana. Values striking their rise. Buy now. Orient Co., Ltd., 513 Audubon Bldg., New Orleans, La.

FACTORY SITES, Business Property, Residences and Farms. If interested in the metropolis of the Southwest or its territory, write for free land list and booklet on Houston, Texas (where 17 railroads meet the sea), or make your wants known. Bank references if desired. Central Land Co., 303 Theater Bldg., Houston, Texas.

PHOSPHATE LAND FOR SALE

PHOSPHATE PROPERTIES.—The best undeveloped in Florida.—No. 1—1,000 acres, guaranteed four million tons high-grade pebble, 65% to 73%. No. 2—2,500 acres, guaranteed ten million tons high-grade pebble, 65% to 76%. Reports and maps furnished. Titles guaranteed. Abstract furnished. Liberal time for examination to responsible parties. W. L. Van Duzer, Kissimmee, Fla.

PHOSPHATE LAND FOR SALE.—600 to 1,000 acres; assays about 60 per cent. bone phosphate; rock average 3 to 5 feet; easy mined, being in hills, giving valleys for waste; plenty water and timber; ½ to 2 miles from railroad spur. Bargain at \$30 per acre. The Jordan Land Co., Box 563, Batesville, Ark.

MARL DEPOSIT

VALUABLE MARL DEPOSIT.—Unlimited quantity; superior quality; assays 95 per cent. carbonate of lime; beats burned lime or ground limestone for land; ideal for handling; railroad through it; price low. Address J. W. C. Miller, Roanoke, Va.

MINERAL LAND FOR SALE

WE ARE IN CONTROL fee delivery (titles perfect), of large boundaries in Tennessee, coal, iron and mineral belt. Surveys 70,000 to 90,000 acres, convenient to transportation, having on it and near all the raw material needed for manufacturing purposes, good bituminous, domestic and coke-making coal; veins show large average tonnage per acre and easy mining cut, and abundance of high-grade iron ores. These valuable holdings can be delivered at comparatively low figures, one-half of what it is in reality now worth, to genuine buyers who can show ratings or bank references to warrant the ability to promptly take over these lands. None but principals need reply. Open bargain to direct buyers. Address J. C. Lindley, Greensboro, N. C.

CUT-OVER TIMBER LANDS

CUT-OVER TIMBER TRACTS.
 50,000 acres cut-over pine lands, Miss.... \$6.50
 30,000 acres cut-over pine lands, La..... 6.00
 75,000 acres cut-over pine lands, Tex..... 5.00
 18,000 acres cut-over hardwoods, La..... 4.50
 Marsh Lands for Reclamation
 60,000 acres in a body, Gulf Coast of La. 3.00
 Timber Lands.
 20,000 acres L. L. Y. pine, Fla., cut 3500 ft. 7.00
 15,000 acres L. L. Y. pine, Ala., cut 7000 ft. 21.00
 30,000 acres hardwood, cut 10,000 ft. (60% red gum)..... 10.00
 Finest red gum proposition South.
 Wm. R. Taylor, 508 Perrin Bldg., New Orleans, La.

4000 ACRES level rich cut-over timber land, \$6 per acre. 14,750 acres cut-over timber hill land, \$3.85 acre. Robert T. Sessions, Winthrop, Ark.

TIMBER FOR SALE

FOR SALE.—Twenty million feet yellow pine, eight million feet fine cypress, on rail and water transportation, twenty miles of Jacksonville. If not as represented owner will refund expense of investigation. Price \$1.50 per thousand. If you mean business communicate with McClure-Davenport-Taylor Co., Inc., Richmond, Virginia.

FOR SALE.—We own 20,000,000 feet of very fine grade of large cypress, located in a swamp right alongside the Sou. Ga. & W. C. Ry. in Madison county, Florida. If interested, write us for further information. The Madison Timber Company, F. J. Ansley, Pres., Thomasville, Ga.

TIMBER LAND FOR SALE

MILLIONS IN IT.—\$6,000,000 acres pine timber land in Mexico, near U. S. border; great milling or investment proposition; only \$2 per acre; easy terms; nothing else like it in America. M. F. Simmons, Kansas City, Mo., 209 Scarritt Arcade.

FOR SALE.—21,000 acres of virgin forest land, all hardwood timber. The timber on the land will pay for it, and the land when cleared will produce a bale of cotton to the acre. Porter & Porter, Sherman, Tex.

FARM AND TIMBER LANDS

TIMBER, FARMING AND RICE LANDS for sale near Wilmington, N. C., on and near new railroad to Southport; new highways now building. Rare bargains for cash. Also an ideal dairy location near Wilmington. E. W. Taylor, Winnabow, N. C.

FOR SALE QUICK.—2000 acres exceptionally fertile land, with 6,000,000 feet timber, bordering on navigable river and only two miles from railroad; timber mostly pine; residence contains 18 rooms and will make an elegant home or hunting lodge. Price only \$25,000. Price of timber, \$15,000. Ask for full description. Address Box No. 33, Oak City, N. C.

FOR SALE.—10,000 acres of land in the finest frostless fruit belt of the Southern Mountains. Also 3500 acres good timber land, oak, poplar and pine. T. B. Finley, Wilkesboro, N. C.

AGRICULTURAL TIMBER LANDS FOR SALE.—We have four tracts of hardwood timber, 1700 to 3500 acres, on which the timber will pay more than double the cost of the land, and all are in the very best farming districts of Texas, on or within three miles of railroad towns, and can be subdivided after the timber is cut off and sold for farms. Price \$12 per acre; easy terms. Write for full particulars. T. H. Barrow & Sons, Austin, Texas.

ARE YOU INTERESTED IN LAND? If so, would like to send you descriptive lists of the best farm and timber lands on earth, in Arkansas, Mississippi and Louisiana; land rents from \$5 to \$12 per acre; prices from \$10 per acre up. Hurst Trust Co., Nos. 3 and 4 Porter Bldg., Memphis, Tenn.

FOR SALE.—Large and small plantations in the rich Red River Valley, cheap and on easy terms; also large tract of hardwood. Apply to E. J. Iles, Alexandria, Louisiana.

I HAVE BARGAINS IN TIMBER TRACTS. large colonization propositions, cut-over lands and reclamation tracts in any size wanted up to 150,000 acres from \$2.50 per acre up.

Wm. R. Taylor, Land and Timber Investments, 508 Perrin Building, New Orleans, La. Established 1898. Sales over \$6,000,000.

FOR SALE.—15,000 acres of land in one body, heavily timbered; best land in the South to produce cotton and truck; climate good; in the pines; only five miles from Charleston; \$17.50 per acre for a quick purchaser; immediate possession; right near famous cabbage belt, where lands cost \$150 per acre; good titles; plenty labor. Sea Island Plant & Seed Co., Meggetts, S. C.

GEORGIA FARM LAND FOR SALE.—I own in fee simple, titles perfect, 9781 acres of fertile farm land, lying along two trunk-line railroads for seven miles and within 38 miles of Savannah, Georgia. On this land is a good stand of yellow pine, estimated to cut 20,000,000 feet, with thousands of cords of firewood, posts, ties and other small timber. Also good 8-room house, a barn that cannot be duplicated for \$1000, stone buildings and other houses, with railroad station, stores and church on the property. Low transportation rates by reason of water competition prevailing at Savannah, giving prompt shipping facilities to Northern markets for vegetables and fruit, with excellent market at home the year round. Healthy location, good water, and nothing better in Georgia as a colonization proposition. Will not divide tract, but with financially able parties will trade outright, or put in property and take interest in development of same. For price and terms and further particulars address W. W. Robertson, Norfolk, Va.

COLONIZATION LANDS

COLONY location in South Georgia; 6000 acres fine trucking lands on two railroads and navigable river; good water and health; titles good; terms easy. H. A. Cannon, Waycross, Ga.

COLONIZATION LAND IN SOUTH GEORGIA.—We have on the Atlantic Coast Line Railroad, between Tifton and Waycross, Ga., several nice tracts for colonization. We can sell you five, ten to fifteen thousand-acre tracts, none further than four or a half miles from railroad station. This is high-class farm land, and will bear close investigation. Write C. L. Parker, Tifton, or McLendon Brothers, Atlanta, Ga.

13,284 ACRES in Gaines county, all tillable, in the shallow water belt of West Texas. This is one of the finest ranches in West Texas, composed of fine agricultural land; subdivided in tracts of 492 acres; a fine colonization proposition; \$20 per acre; \$5 due the State; low rate of interest; will take one-third in good trade; terms on balance. Cheatham & Haney, Room 2 Provident Bldg., Waco, Tex.

TRACT FOR COLONIZATION.—12,000 acres in Lavaca and Jackson counties, Texas; 95 per cent. tillable; black waxy and black sandy land. On both sides of Lavaca River. Numerous settlements and good wells of water on tract; all subdivided and ready for colonizing. Will give good terms on this tract. Emil Locke, No. 712-13 Gibbs Bldg., San Antonio, Tex.

SAFE INVESTMENTS THAT PAY.—U. S. census report for 1910 shows that Texas farm land values increased 214% in 10 years. Texas has just started to develop, and the next 5 years will bring startling results, due to heavy influx of people from all parts of the world, and also augmented by the completion of the Panama Canal. If you want an investment, investigate this proposition: 11,000 acres good farm land, 85% of which is smooth prairie; will grow any kind of crops; located in the rain belt, where the climate is ideal, 4½ miles of Edna, in Jackson county. A fine colonization proposition that will sell in small tracts for \$50 per acre. Owner must sell as a whole, and will sacrifice for quick sale at \$22.50 per acre; one-fourth cash; balance easy terms, with release clause. Write A. A. Ritcheson & Co., Austin, Texas. Reference, Austin National Bank.

PECAN ORCHARDS

FIVE-ACRE PECAN ORCHARDS IN ALABAMA.—I am offering fifty tracts of this size to the first fifty buyers. Now is your opportunity to get a start in this profitable business on easy terms. Monthly payments if desired. I can furnish best of references, and, if preferred, will manage tracts for non-resident owners. Write for full particulars and terms. Oscar V. Case, Fort Payne, Ala.

FARM, FRUIT AND TRUCK LANDS

ALABAMA

ALABAMA.—Good health, fine water, lovely climate; large and small farms at bargain prices; grow anything. Write now for list. G. A. Taylor, Opelika, Alabama.

FOR SALE BY OWNER.—Do you want to combine health and wealth at a nominal cost on easy terms? 240 acres of good unimproved land in the healthiest location in the South, adapted to grain, grasses and stock raising, and especially adapted to winter apples that will pay net \$100 per acre when in bearing, and they never fail; near fine school, good churches and good neighbors; absolutely perfect title; \$10 per acre; \$1 per acre cash and \$1 per acre each month till paid for; no interest; no taxes until paid in full; 10 per cent. discount for cash. Address C. C. Brown, Mentone, Ala.

ARKANSAS

FOR SALE.—Plantations in St. Francis Valley. Have special bargain in 1320-acre plantation near St. Francis river, 40 miles of Memphis, Tenn. 527 acres on St. Francis River. In White River Valley have 1000-acre farm, black sandy soil, well drained, no overflow, 800 acres in cultivation; price \$32,000. Good cotton, corn or alfalfa. If you want to buy good farm in Arkansas, write J. L. Hawk, Forrest City, Ark.

FOR SALE.—A fine cotton plantation of 532 acres, known as the "Galloway place," near Scott, Ark.; want to sell by the 15th November, 1911. R. A. Little, Little Rock, Ark.

FLORIDA

TRUCK FARMS, large and small, close to town; colonization tract, and winter home in Florida; all modern conveniences; adjacent to fine fishing and wild game. Power & Brooks, Box 82, Montgomery, Ala.

FLORIDA FRUIT AND TRUCK LANDS.—We offer 10-acre tracts in that part of the State of Florida lying in Hillsborough county and Lake Butler region, in the Pinellas peninsula, on the west coast of Florida, on the Gulf of Mexico; with its elevation and rolling hills is especially suited for fruits of all kinds—grapefruit, oranges, grapes, dates, figs, bananas, peaches and other fruits, as well as vegetables, potatoes, corn, beans, peanuts and all the varieties that can be produced anywhere. The Tarpon Springs district offers the most favorable conditions for farmer, home seeker and investor. Fertile lands in small tracts, easy monthly payments; guaranteed title. Investigation invited. If you want a bargain and a home in the most desirable part of Florida, write now for particulars and reservation. Tampa & Tarpon Springs Land Co., Tampa, Florida.

FLORIDA winter home and celery farm, 10 acres, subirrigated, facing St. Johns River; finest fishing and shooting; beautiful bungalow, surrounded by orange trees. Address Cecil Gabbett, Sanford, Florida.

WHY PALMETTO LEADS.—The 800,000 boxes of fruits and early vegetables attests the superiority of soil, climate and irrigation necessary to produce such crops. The ease with which such crops are handled by rail and water make it an ideal place for fruit and vegetable growing. The Manatee River, Terra Clus and Tampa bays furnish ideal salt-water fishing, boating and bathing. For further information address The Manatee River Board of Trade, Palmetto, Florida.

FLORIDA FARMS ARE FORTUNES.—Our soil similar to fertile sections Iowa, Missouri; easy-payment plan. Write for booklet. Milton Land & Investment Co., Marianna, Fla.

GEORGIA

OLD ROOSEVELT HOMESTEAD.—827 acres known as "Cedar Hill Plantation," which Roosevelt's great-grandfather was married; mansion still standing; 200 acres under cultivation; good wire fence; balance oak, black gum and other hardwood timber; only 30 miles from city of Savannah; Sea-board Air Line station within half mile of house; main auto road Savannah to Jacksonville through property. We offer this famous plantation for quick sale at a bargain-counter price. Bernard & Waters, Georgia Farms Specialists, Savannah, Ga.

LOUISIANA

IDEAL STOCK OR DAIRY FARM, located in West Feliciana parish, Louisiana; La. Railway and Nav. R. R. and Y. & M. V. R. R. pass through place; contains 800 acres; running streams through place. For price and particulars address J. H. Percy, P. O. Box No. 136, Baton Rouge, La.

TRUCK AND DAIRY LANDS.—200 improved farms. On account of boll-weevil can sell \$20 to \$30 per acre; on main line of L. C. Ry., 38 miles north of New Orleans, 18 miles north of largest strawberry shipping point in U. S., and 45 miles south of largest tomato shipping point; two creameries in 20 miles. Send for catalogue. Oayka Realty Co., Inc., Osyka, Miss.

MEXICO

250,000 ACRES in the State of Coahuila, Mexico, in the famous Laguna District. This land will produce anything that grows in the temperate zone, especially cotton. There is an abundance of never-failing water, one spring now irrigating 250 acres. Soil is sandy loam. The principal feature of this tract is the entire absence of gravel near the foothills. The high lands of the tract afford the finest pasturage, and the abundance of springs makes it unnecessary to pump water for stock. One big ranch-house and fourteen houses for laborers, 250 head cattle, 6 mules, 3 wagons, hack and harness to match. Titles perfect and guaranteed. This can be bought for \$1.25 an acre. Henry Cass & Fry, 30 City National Bank, El Paso, Tex.

MISSISSIPPI

2555 ACRES of good hill cotton land for sale; now in successful operation; well supplied with negro labor. The plantation lies between two branches of the Illinois Central Railroad; nearest shipping point, four miles from the dwelling. The land corners within half mile of the railroad. A sufficiency of cabins for tenants, stables, cribs, cotton pens and all outhouses. Forty-five head of mules and horses, cows, farming implements and feedstuff. Price very low. Terms good. Address A. C. Leigh, Grenada, Miss., bona-fide owner of the property.

Classified Opportunities

[CONTINUED FROM PAGES 86 AND 87.]

MISSOURI

IDEAL STOCK AND FRUIT FARM in the Ozarks, Taney county, Missouri; no sheep diseases; stock winters on the range; plowing in February; 460 acres; 20 orchard; 40 tillage; 160 pasture; 1200 fruit trees; equal number small fruits; house, barn, smoke and spring house; well watered; valuable timber, pays more than for taxes and improvements; three miles from railroad at Hollister; \$15 per acre. J. E. Burbank, Malden, Mass.

NORTH CAROLINA

FARM FOR PROFIT in Eastern North Carolina, the "Nation's Garden Spot." Leads other localities for vegetables, fruits and staple farming on small capital. Homeseekers and investors, write Carolina Trucking Development Co., 815 Southern Bldg., Wilmington, N. C.

SOUTH CAROLINA

WE HAVE FOR SALE in Marion county and vicinity several productive farms, also some of the most desirable town property. Parties wishing to locate in the South will do well to write us for information. We can also locate homeseekers in the berry and fruit growing section. Nathan Evans, E. W. Boatwright, Marion, S. C.

FOR SALE—11 acres land Williamsburg county; dwelling, store and outbuildings; one acre cleared; beautiful grove; good business center; churches, schools near. J. L. Cook, 1405 Main St., Columbia, S. C.

TEXAS

PECOS PALISADES LANDS—Ranch and irrigated lands in lower Pecos Valley. S. L. Estes, 405 North Texas Building, Dallas, Texas.

IRRIGATED FARM—450 acres of rich sandy loam, level, and to be irrigated from the famous Elephant Butte Dam, now in course of construction. This land can now be bought for \$35 an acre. Write us for full description. Loomis Bros., El Paso, Texas, Mexican Timber Lands.

FOR SALE—23½ acres prairie land, located on Santa Fe Railroad and on public road (shelved) only 13 miles from Beaumont and one-quarter mile from Fannett; suitable for general farming or for subdividing into smaller tracts. Title perfect. Price \$27.50 per acre. Also other lands suitable for subdivision. Texas Realty Co., Beaumont, Texas.

IRRIGATED LANDS—Parties in the North, East and Middle West interested in improved and unimproved irrigated lands and ranch property in the great Pecos section, communicate with us. Pawkett & Davis, Pecos, Tex.

600-ACRE BLACK LAND FARM—20 miles of Fort Worth; good agricultural land; well watered. Price \$45 per acre; worth \$75. We have hundreds of good farm propositions. Particulars upon request. Walton & McCauley, 105½ South 4th St., Waco, Texas.

FOR SALE—8000 acres about 40 miles east of Austin (the capital of Texas), mainly good agricultural land. (Average rainfall for fifty years about thirty-three inches.) A sure crop country. Price \$10 per acre. Geo. W. Walling, Jr., Austin, Texas.

WACO, TEXAS—Central and South Texas farms and ranches a specialty. South Texas fig and orange lands offer best dividends on investments from \$60 to \$150 per acre. Write us for particulars. Elder & McDonald, Room 614 Amicable Bldg., Waco, Tex.

JAS. GOODE REAL ESTATE CO., ranch and irrigated lands. Office, Orient Hotel, Pecos, Tex.

SAN BENITO, TEXAS, IRRIGATED LANDS—10 acres or more, close to shipping stations of the Interurban Railroad; big canal through every tract. Ask for booklet. Engle Bros., 412 Gibbs Bldg., San Antonio, Tex.

TEXAS COTTON AND SUGAR PLANTATION—2000-acre plantation on Colorado river, near Eagle Lake; railroad switch on property; about 1000 acres river-bottom land in cultivation; 18 houses, barns, cribs and cotton gin, grist mill, blacksmith shop and many other improvements; 200 head stock; about 40 horses and mules; planted this year in cotton and corn; finest pecan grove in South Texas on property. Altogether in finest and cheapest thing in State. Everything goes for \$35 per acre; easy terms. Kullenberg Realty Co., 302 Gibbs Bldg., San Antonio, Texas.

COTTON AND CORN LAND—12,500 acres, near two good railroads, lying one mile from one and two miles from the other; splendid colonization tract; at \$10 per acre; one-fourth cash; balance 6 per cent. Address owner, Dr. C. S. Preston, 1007 Scanlan Bldg., Houston, Texas.

THE FRIO VALLEY WINTER GARDENS, La Salle county, Southwest Texas, a colony of 100,000 acres level rich black sandy loam in famous artemesian belt; grow oranges, figs, Bermuda onions. We are opening Fowerton, a new town on new railroad in heart of the colony. Guaranteed improvements on town-site. A 10-acre farm and free residence lot on terms of \$15 cash; balance \$10 monthly. Write for booklet A, prices, plans, etc. Fowler Brothers Land Co., Frost Building, San Antonio, Texas.

GREATER HOUSTON (Population over 100,000)—Just twelve miles out on Main street (Houston's \$200,000,000 thoroughfare) is located North Houston Gardens; 10-acre tracts only \$800; terms, \$25 cash, balance \$15 per month, no interest; five-acre tracts, \$400; terms \$15 cash, balance \$7.50 per month, no interest; 142-acre improved farm 50 miles from Houston, price \$25 per acre. H. S. Taylor, Scanlan Bldg., Houston, Texas, Member Houston Real Estate Exchange and the Texas Realty Association.

FOR SALE—Farm at Arcadia, Texas, consisting of five acres and five-room cottage, large barn, chicken-houses, fine well, also large tank for rain water; all improvements in good condition. This land will grow anything. It is fine orange land; has some orange trees on it. Arcadia is 15 miles from Galveston, on the Gulf, Colorado and Santa Fe Railroad, and a growing town. The climate is delightful and healthy. This place can be bought at bargain. J. L. Boddeker & Co., Agents, 410 20th St., Galveston, Texas.

FOR SALE—300 acres fronting on San Saba River, 15 miles from depot; about 200 acres in cultivation; two sets improvements; fine truck land; only 30-foot lift to irrigate; will produce 300 bushels potatoes and 500 bushels onions per acre; will cut up and give long terms. G. W. Hutchison, Owner, Ebony, Texas.

FOR SALE—162 acres of smooth, level land in the artemesian belt; unimproved; artemesian water can be had at about 800 feet. This land is one and one-half miles from Derby, Frio county, Texas, on the International & Great Northern Railway. If you want a fine piece of land, write to Henry Borchers, Laredo, Tex.

IRRIGATED TRUCK FARM for sale, three miles from San Marcos, Texas, the city of good schools; 40 acres in cultivation; nice pecan grove; lasting water; seven-room house; an ideal place for dairy, chicken ranch and truck farming; \$150 per acre. J. R. Porter, San Marcos, Texas.

VIRGINIA AND MARYLAND

SHENANDOAH VALLEY FARM, twenty-one acres, including orchard of twelve acres which pays annually over ten per cent. on investment; good eight-room house, all necessary outbuildings; fine section. Price \$3250. McClure-Davenport-Taylor Co., Inc., Richmond, Virginia.

VIRGINIA AND MARYLAND high-class water-front property on the famous Eastern Shore of Maryland, also on the Chesapeake Bay in Virginia, and farms in all the Piedmont section; many bearing commercial apple orchards in the mountains of Virginia. Send for Catalogue S. Southern Farm Agency, 721 Main St., Lynchburg, Va.

FARMS of 30 acres, \$1000; 68, \$1200; 225, \$7500, and a beautiful river front of 28 acres, \$1000; most beautiful climate. F. A. Clark, Mathews C. H., Va.

FOR SALE—420 acres land; 9-room house, hot and cold water, bath, etc.; heated by hot water; several tenant-houses, barns, etc.; one mile from county seat and railroad; fine bottom land and timber. Price, with equipment, \$15,000. Address Wm. G. Miner, Chatham, Va.

MACHINERY AND SUPPLIES

FOR SALE—Rebuilt Fay & Egan six-roll planer and matcher in good condition; two extra pair cutter heads. Yellopine Lumber Co., Greensboro, N. C.

USERS OF BELTING, READ THIS—Ten thousand feet new rubber belting, 1½ to 4 inches wide, 50 and 50' of list. State widths wanted. Will send samples so you can see what you are buying. Address J. F. Ripley, Joplin, Mo.

WANTED—Every consumer in the Southwest to know that the Texas Rolling Mill Company of Fort Worth, Texas, manufactures track spikes, track bolts, machine bolts and nuts; also standard sizes of bar iron. One hundred tons always in stock. Prompt shipments our specialty. Satisfaction guaranteed.

FINANCIAL

FOR SALE—\$50,000 worth first mortgage 8 per cent. notes on improved farm lands located in Central Texas. Chestnut & Haney, Waco, Texas.

I WILL SELL a few first-class farm mortgages bearing 8 per cent. interest, secured by improved farms worth more than twice the amount of loan, on a basis attractive to investors, large or small. My securities are in the best agricultural section of Texas. Reference, any bank in Waco. Address J. N. McFarland, Financial Agent, Waco, Texas.

8 PER CENT. 5-YEAR OKLAHOMA FARM MORTGAGES—Yes, rate is high, but sure and easily paid; conditions warrant it, and you get benefit; lands cheap, rich; values doubling; 25 years' experience in Southwest; 10 years bank cashier here; know people, lands, laws, resources, local conditions; never lost a mortgage nor had a title contested; abundant references; circular; investigate. J. G. JAMES, Roff, Oklahoma.

SAVANNAH, GA.—Real estate loans paying 6 per cent. to 7 per cent. to the investor, absolutely safe. Beautiful sites for water homes at Vernon View, the salt-water place near Savannah on the Grand Prize Course. Ideal winter climate. G. A. Mercer, Law and Real Estate, Savannah, Ga. References: Any bank or trust company in Savannah.

PATENT ATTORNEYS

EUGENE C. BROWN, ENGINEER and Patent Lawyer, Suite 40 Victor Bldg., Washington, D. C. Member Bar U. S. Supreme Court. Patents and Trademarks; Patent Suits for Infringement. Mr. Brown is especially qualified to prosecute cases in Patent Office and patent litigation from both Engineering and Legal standpoints, having been Examiner in U. S. Patent Office for many years. Send sketch for advice.

PATENTS OF QUALITY—The valuable and salable kind. Send for free advisory information. Reference to clients throughout the U. S. Geo. R. Hamlin, Patent Lawyer, Inventive Age Bldg., Washington, D. C.

IDEAS WANTED—Manufacturers are writing for patents procured through me. Send for free 72-page guide and "Stepping Stones" containing over 200 inventions wanted. Personal services. Clients' patents sold free. Trade-marks registered. R. B. Owen, Dept. 12, Washington, D. C.

PATENT YOUR IDEAS—\$100,000 offered for one invention, \$5000 for another; book, "How to Obtain a Patent" and "What to Invent," sent free; send rough sketch for free report as to patentability; patent obtained or fee returned. We advertise your patent for sale at our expense. Chandler & Chandler, patent attorneys, 978 F street, Washington, D. C.

PATENT WHAT YOU INVENT—Your ideas may bring you a fortune. Our free books tell what to invent and how to obtain a patent. Send sketch of invention for free opinion as to patentability. Patents obtained or fee returned. Patents advertised for sale free. H. Ellis Chandler & Co., successors to Woodward & Chandler, Suite 75 Borneo Bldg., Washington, D. C.

PATENTS Secured or Fee Returned. Send sketch for free report as to patentability. Guide book and what to invent, with valuable list of inventions wanted, sent free. \$10,000 offered for one invention; \$15,000 for others. Patents secured by us advertised free in World's Progress; sample free. Victor J. Evans & Co., Washington, D. C.

PATENTS FOR SALE

WE HAVE recently secured the following patents. Address all communications to Sales Dept., Victor J. Evans & Co., Washington, D. C.: E. Matejka, rail joint; John H. Mahle, mail-delivering apparatus; J. H. Totten, veneer sizing machine; Jas. S. McKee, pile supporter; Leonard H. Steel, glass-lined insulated milk can; James L. Pepper and A. V. Mikelson, wagon-box lifter or rack jack; John McDonald, car chain; Elmer Johnson, back rest for machine seat; J. L. Johnson, tile machine; Alex. L. Hay, parlor game; Geo. E. Humphrey, railroad tie; Edward Zimmerman, reversible coffee pot; J. R. Brooks, gas lighter; Abraham A. Simon, feed bag; Frederick Payne, invalid bed; Benj. A. Carlson, axle; Chas. H. Child, button or pin; Messrs. W. M. Border and S. P. Love, shock absorber; John W. Balfour, spike; J. S. McAnarney, metal railway tie; T. D. Driscoll, railway tie; Ephraim P. Golden, hangers for sliding doors; Messrs. R. D. Kenyon, painter's guard; Walter E. Browne, oval revolving machine.

PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

MISCELLANEOUS.

GOVERNMENT PROPOSALS

PROPOSALS FOR LUMBER, SEALED proposals will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. November 10, 1911, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 655) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce and Board of Trade, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

PROPOSALS FOR MATERIAL PARTS for Snubbing Posts and Springs, Anchors, etc., for Buffers on the Lock Walls. Sealed proposals will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. November 13, 1911, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 656) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce and Board of Trade, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

PROPOSALS FOR CHAIN, IRON AND Steel Pipe, Pipefittings, Iron Washers, Sheet Zinc, Packing, Mop Heads, Paint Brushes, Scythes, Coke, and Lumber Tags. Sealed proposals will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. October 28, 1911, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 657) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce and Board of Trade, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., October 3, 1911. Sealed proposals will be received in this office until 3 o'clock P. M. on the 16th day of November, 1911, and then opened, for the construction, including roof and ground surface drainage system of a four-story stone-faced fireproof building of approximately 90,000 square feet of ground area for the Bureau of Engraving and Printing, Washington, D. C. Drawings and specifications may be obtained at this office at the discretion of the Supervising Architect, but will not be ready for delivery before October 21, 1911. JAMES KNOX TAYLOR, Supervising Architect.

PROPOSALS will be received at the Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 o'clock A. M. October 31, 1911, and publicly opened immediately thereafter, for completing boiler-house at the Naval Experiment Station, near Annapolis, Md. Applications for proposals should refer to Schedule 3955. Blank proposals will be furnished upon application to the Navy Pay Office, Baltimore, Md., or to the Bureau. T. J. COWIE, Paymaster-General, U. S. N. 10-16-11.

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PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

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NEW BOND OFFERINGS

6% Bonds For Sale

The Snow Flake Lime & Rock Company of Fort Spring, W. Va., offers for sale 6 per cent. bonds maturing in ten and twenty years, secured by mortgage on their plant. For full information address
JOHN S. CRAWFORD, Pres.,
Lewisburg, W. Va.

\$16,000 Bonds for Sale

\$16,000 Serial Bonds of the Town of Brooksville, Florida; denomination \$100. Five to be retired annually, beginning with lowest numbers. Issued for specified improvements. Send sealed bids to Town Clerk or write Clerk for full information.

Bond Sale

Bids will be received by the undersigned Clerk until 2 o'clock P. M. November 1, 1911, for \$12,500 of bonds of the Town of Jennings, Florida, to bear interest at 6 per cent. per annum; interest payable semi-annually; said bonds to run for 30 years. The right is reserved by the Town Council to reject any and all bids. For further information address the undersigned Clerk.

J. C. BARNES,
Clerk for Town of Jennings,
Jennings, Florida.

\$20,000 Water-Works Bonds

NOTICE TO BOND BUYERS.

Notice is hereby given that the Board of Trustees of the Town of Braggs, Oklahoma, will receive bids on its water-works bonds in the sum of \$20,000. All bids must be in writing and deposited with the Town Clerk on or before October 24, 1911, at 8 o'clock P. M., and must be accompanied by a certified check for at least 1 per cent. of the amount of said bid. Board reserves the right to reject any or all bids, in which case check will be immediately returned.

J. J. JOHNSON,
Clerk.

\$74,000.00 5% Refunding Electric-Light and Water-Works Bonds of the Town of Wilson, North Carolina.

Mayor's Office,

Wilson, N. C., September 7, 1911.
Sealed proposals will be received by the Clerk of the Board of Commissioners of the town of Wilson, N. C., until January 1, 1912, at 12 o'clock M., for the purchase of \$74,000 5 per cent. coupon bonds, known as "Refunding Electric-Light and Water-Works Bonds of the Town of Wilson." Said bonds to mature 30 years after date of issue, and interest made payable semi-annually at the office of the Treasurer of the Town of Wilson or at some bank in New York City, at the option of the purchaser. Each proposal must be accompanied by a certified check for \$1000, payable to the order of the Treasurer of the Town of Wilson, as a guarantee of good faith, and to be forfeited to the said Town of Wilson as damages in the event of the failure of the successful bidder to comply with bid within ten days from the opening of said bids. The right is reserved to reject any and all bids. For further information address
THO. A. HINNANT,
Clerk Board Commissioners,
Wilson, N. C.

\$70,000 6% Bonds

NOTICE

Notice is hereby given that the County Commissioners of Walton County, Florida, on Tuesday, the 7th day of November, A. D. 1911, at 12 o'clock M. on said day, will receive sealed bids for the purchase of the bonds for Special Road and Bridge District No. 1 of said County of Walton, at the office of the Clerk of the Circuit Court of Walton County, Florida. The said offer for sale being bonds authorized by election held on the 8th day of August, A. D. 1911, the total amount of this bond issue being seventy thousand (\$70,000) dollars. The total amount of bonds offered for sale and to be bid for at this time, par value, is seventy thousand (\$70,000) dollars, bearing interest at the rate of six (6%) per cent. per annum; interest payable semi-annually on the first of June and first of December of each year; principal payable at the expiration of twenty years from date of bonds, said date being November 1, 1911; both principal and interest are payable at the office of the County Treasurer of Walton County, Florida. Any and all bids may be rejected if the County Commissioners shall deem it for the interest of the county to do so. For further information apply to Chas. H. Gordon, Clerk Circuit Court, Postoffice De Funak Springs, Walton County, Florida.

J. D. RUSS,
Chairman Board County Commissioners,
Walton County, Florida.
Attest:
CHAS. H. GORDON,
Clerk Circuit Court, Walton County, Florida,
and Ex-Officio Clerk Board County Commissioners, Walton County, Florida,
De Funak Springs, Fla., October 9, 1911.

\$42,000 5% Sewer and Water-Works Bonds

Sealed bids will be received by the Mayor and Board of Public Works of the town of Kingstree, S. C., until twelve noon November 11, 1911, for the purchase of \$42,000 water-works bonds and \$14,000 sewer bonds, payable in forty years, with option of redemption in twenty years, bearing 5 per cent. interest, payable semi-annually, in one thousand denominations. The town reserves the right to accept or reject any or all bids. The town of Kingstree is the county seat of Williamsburg county, with a population of 2000, and free from any indebtedness. For further information address L. P. Kinder, Mayor, and LeRoy Lee, Chairman of Board of Public Works.

\$160,000.00 City of Winston Bonds

Sealed bids will be received by the City of Winston, N. C., until 12 o'clock M. of the 26th day of October, 1911, for an issue of one hundred and sixty thousand dollars, par value, 4 1/2 per cent. Improvement Bonds, bearing date October 1, 1911, payable forty years after date, each of the denomination of \$1000; principal and interest payable at the Wachovia Bank & Trust Company, Winston, N. C., or at such other place as the purchaser may require; interest payable semi-annually.

Each bid for the above bonds or portions thereof must be for a sum not less than par and accompanied by a certified check, payable to William D. Jackson, Treasurer of the City of Winston, for 2 per cent. of the par value of the bonds bid for; money to be paid and bonds delivered at Winston, N. C. Full particulars given on request.
WILLIAM D. JACKSON, Treas.,
City of Winston, N. C.

\$60,000 6% Water-Works Bonds

Sealed bids will be received by the Town Clerk of Halleysville, Okla., until 4:30 P. M. October 23, 1911, for the purchase of sixty thousand (\$60,000) dollars water-works bonds, payable in 25 years and bearing 6 per cent. interest, payable semi-annually. The town reserves the right to accept or reject any or all bids.

J. P. CREASY,
Clerk.

\$80,000 5% Bonds

TOWN OF ST. ELMO, TENN.

Sealed proposals will be received by H. B. Wilson, Mayor, until 4 o'clock P. M. October 24, 1911, for \$80,000 30-year Sewer Bonds of \$1000 denomination, dated November 1, 1911, interest 5 per cent., payable November and May 1. A certified check for \$1000 required, payable to F. A. Seagle, Treasurer. The Commissioners reserve the right to reject any or all bids.

Sale of Refunding Bonds

Notice is hereby given that sealed bids will be received by J. E. Swain, Asheville, N. C., Attorney for the Board of County Commissioners of Buncombe County, up to 12 o'clock noon on Tuesday, November 7, 1911, for an issue of refunding bonds of said county in the sum of fifty thousand (\$50,000) dollars, and payable twenty years after date, with interest at the rate of five per cent. (5%) per annum from date of issue, payable semi-annually.

Any question as to the validity of said issue to be submitted to the Supreme Court at the expense of the county.

Purchaser must refund accrued interest on bonds to date of payment for same. The county reserves the right to reject any and all bids.

Certified check of five per cent. (5%) must accompany bid. No private bank or banker's check received.

Full information with regard to tax valuation, population and indebtedness of the county will be furnished upon application to the undersigned.

J. E. SWAIN,
County Attorney.

\$100,000 Cocke County (Tennessee) Road Bond Issue

Sealed bids will be received by the undersigned until 2 o'clock P. M. October 28, 1911, for \$100,000 bonds of the denomination of \$1000, dated January 1, 1912, bearing 5 per cent. semi-annual interest, January 1 and July 1, and payable as follows:

Four thousand (\$4000) dollars in five years, and

Four thousand (\$4000) dollars each succeeding year thereafter until all are paid. Principal and interest payable at the office of the Trustee of Cocke County, Tennessee, or at a national bank in the city of New York, at the option of the holder.

Each bid must be accompanied by a certified check of \$3000 on a reputable bank, payable to Cocke County Pike Commission.

The right is reserved to reject any and all bids.

Bids and inquiries should be addressed to
GEO. W. GORRELL,
Secretary of Commission,
Newport, Tennessee.

COCKE COUNTY PIKE COMMISSION,
John Weaver, Chairman;
Geo. W. Gorrell, Secretary;
R. M. Jones.

Bonds For Sale

Sealed bids will be received for the purchase of seventy-four (74) municipal bonds of the town of Colonial Beach, Virginia, of the denomination of \$500 each, dated November 9, 1911, and drawing interest at the rate of 6 per cent. per annum, payable semi-annually on the 9th day of May and November of each year. Said bonds to mature November 9, 1936, payable at the office of Town Treasurer.

Bonds to be delivered at Town Treasurer's office to purchasers.

Said bonds sold for water-works and sewer.

Said bids to be received up to 12 M. on the 9th day of November, 1911.

Right reserved to reject any and all bids.
H. W. B. WILLIAMS, Mayor.
J. O. HEFLIN, Clerk.
October 13, 1911.

WATERWORKS AND SEWERS

Proposal for Constructing Water-Works and Sewer System for Town of Amory, Miss.

Sealed proposals for the construction of a water-works and sewer system for the Town of Amory, Miss., will be received by the Mayor and Council of said town until four o'clock P. M. November 7, 1911.

Bidders must use the proposal sheets furnished by the town and should address their proposals to Eugene C. Dalrymple, City Clerk, and mark them "Proposals for Furnishing Material and Constructing Water-works and Sewers."

The plant will consist of one (1) elevated tank with maximum head of 150 feet, 100,000 gallons capacity; two (2) 500-gallons-per-minute motor-driven pumps; one (1) air-lift system; approximately five miles of mains, 4 to 10 inches in diameter; deep wells; 58 fire hydrants, valves and valve boxes.

The sewer system will consist of approximately seven (7) miles of sewers, 8, 10, 12 and 18 inches in diameter; 58 manholes; 11 flush tanks. Proposals will be received, first, for furnishing material and constructing water-works and sewer systems, complete, and second, for furnishing labor and constructing the systems; the town to furnish the material, for the whole work, or any of the subdivisions as shown by the specifications.

Each proposal must be accompanied by a certified check for an amount equal to 3 per cent. of the bid as a guarantee that the contract will be entered into if awarded. A bond of 25 per cent. of the contract price will be required. Payments will be made in cash on monthly estimates.

Plans and specifications are on file at the office of the Mayor of Amory, Miss., and also at the office of the Solomon-Norcross Company, Engineers, 162-23 Candler Building, Atlanta, Ga. Bidders may obtain same by enclosing check for \$10, payable to Engineers, to be held until return of plans. The Council reserves the right to reject any or all bids.

J. A. MAYFIELD,
Mayor.

SOLOMON-NORCROSS COMPANY,
Engineers, Atlanta, Ga.

Water-Works Plant

NOTICE TO CONTRACTORS.

Notice is hereby given that the Board of Trustees of the Town of Braggs, Oklahoma, will receive bids for the construction of a water-works plant, to be owned exclusively by said town, up to 8 o'clock P. M. October 24, 1911. Plans and specifications for said plant are on file in the Clerk's office, and can be examined by any prospective contractors.

J. J. JOHNSON,
Clerk.

MISCELLANEOUS

Plans for Supreme Court Building

The State Building Commission will receive at Tallahassee, Florida, until Thursday, December 7, 1911, at 10 o'clock A. M., architects' plans for a Supreme Court, Railroad Commission and Library Building in Tallahassee. A general description of the building desired will be furnished upon application to

A. C. CROOM,
Secretary Building Commission,
Tallahassee, Florida.

Postponement of Opening of Bids—Irrigation Canal

The Medina Irrigation Company, 539 East Houston street, San Antonio, Texas, announces that the opening of bids previously advertised to occur October twentieth for constructing the west canal and subsidiary structures will be postponed ten days. Sealed bids on the work as previously advertised will be received by the Medina Irrigation Company at the above address until three P. M. October thirtieth.

THE MEDINA IRRIGATION CO.

Furniture For Courthouse

Beeville, Texas.

The Commissioners' Court of Bee County will receive bids until 2 P. M. October 30, 1911, for furniture for the new courthouse. All bidders must exhibit samples. All bids must be accompanied with a certified check of 10 per cent., which shall be held by the Commissioners' Court until the contract is fulfilled. Specifications may be obtained from Stephenson & Heldenfels, Architects, Beeville, Texas.

Notice to Architects

Plans and specifications for the proposed buildings of the State Normal and Industrial School for White Women in the city of Radford will be received by the Board of Trustees of the School at a meeting to be held in Richmond, in the Capitol, on Tuesday, November 14th, 1911. It is contemplated that the cost of the buildings will be one hundred and fifty to two hundred thousand dollars.

The location and relative situation of the Administration building and Dormitories should be indicated in the plans. Blueprints may be had from Capt. W. T. Baldwin or the undersigned, by parties interested, of the site.

The Board reserves the right to reject any and all plans, and does not assume any responsibility or cost whatsoever, except to the Architect whose plans may be adopted.

The plans, in a sealed package, may be mailed to the undersigned at East Radford, or delivered to him in Richmond on the 14th of November.

By order of the Board.
G. E. CASSEL, Secretary.
East Radford, Va., October 9, 1911.

Pumping Machinery and Laying Cast Iron Pipe, Etc.

Charlotte, N. C.

Sealed proposals will be received by the Board of Water Commissioners of the City of Charlotte, at the office of the Clerk, until 3 P. M. October 17, 1911, for the following:

Laying about 9 miles of 24-inch cast-iron pipe.
Furnishing valves.
Furnishing two 350-horse-power motors.
Furnishing two centrifugal pumps (5,000,000 gallons capacity each).
Furnishing one 3,000-gallon steam pump.
Furnishing transformers and switchboard.
Furnishing two boilers and setting same.
Bids for other work and materials will be advertised for later.

Plans and specifications will be on file at the office of the Clerk and at the Engineer's office in Charlotte, N. C.

Copies of specifications, form of proposal, etc., will be furnished on deposit of \$5, which deposit will be refunded on return of same. Map and profile of pipe line will be furnished on payment of \$5.

As an evidence of good faith, each bid must be accompanied by a certified check for not less than 10 per cent. of the amount of bid; but check is to be for \$5000 if bid is on laying pipe line.

The right is reserved to reject any or all bids.

BOARD OF WATER COMMISSIONERS.
A. H. WEARN, Clerk.

Engineer:
GILBERT C. WHITE.

Bridges

NOTICE TO CONTRACTORS.

The Commissioners' Court of Brazoria County, Texas, will receive sealed bids up to twelve o'clock noon of Wednesday, the 1st day of November, 1911, at the office of Hon. J. W. Munson, County Judge of said county, at Angleton, Texas, for the furnishing of all materials and labor required to construct, erect and complete ready for use two bridges over the Brazos River, one at Columbia and one at Brazoria, in accordance with approved plans and specifications on file at the office of said County Judge. Bids will be opened in the afternoon on the above-named date.

Contractors shall submit bids in lump sum for each bridge separately, and for both bridges taken together. The bid for each bridge must be accompanied by a certified check for \$3000, payable to J. W. Munson, County Judge, as surety that if awarded the contract for the work the contractor will enter into a valid contract and furnish satisfactory bonds in amount of the contracts.

Contractors are requested to visit the two locations before submitting bids.

Duplicate sets of plans and specifications may be secured from F. S. Rice, Engineer, Sweeny, Texas, on written application, accompanied by check for \$10, which check will be returned to unsuccessful bidders on receipt of bids as above and return of plans. \$100,000 4 per cent. gold bonds issued by county to pay for bridges; interest payable semi-annually; due 40 years after date; redeemable after five years; dated April 10, 1911. Contractors will submit bids for the work payable in bonds in installments as work progresses.

The Court is desirous that actual construction be commenced as early as possible, and all contractors shall specify in their bids the time at which active work will be commenced and when completed.

Said Court reserves the right to reject any and all bids, and the successful bidder or bidders will be required to guarantee the work for ten years.

J. W. MUNSON,
County Judge.

Special Advertisements of General Interest.

An Up-to-date Wood Working and Saw Mill Plant for Sale

Complete in every particular. Covering 2½ acres of land in the center of Norfolk, now doing a business of over \$100,000 per year. For sale cheap.

Details furnished on application.

ABBOTT MORRIS & CO.

NORFOLK, VA

GEORGIA FARM LAND FOR SALE

About 10,000 acres fertile farm land within 38 miles of Savannah, Georgia; healthy location and good water, suitable for colonization. A good stand of yellow pine timber, estimated at 20,000,000 feet and thousands of cords of wood. Located for seven miles on two main line railroads, giving low freight rates, secured by water transportation competition, to Northern markets, with all-year markets close at hand. Will not divide tract. Will sell outright or put in property and take interest with financially able developing company.

W. W. ROBERTSON, Owner

NORFOLK, VA

J. T. KIMBROUGH

**WE LOCATE MANUFACTURERS
REAL ESTATE**

409-10 Atlanta National Bank Bldg.

ATLANTA, GA.

PLANING MILL

FOR SALE

Planing mill equipped with good, up-to-date machines, such as S. A. Ward Flooring Machine No. 24.

10-inch Hermance Molder.

Hermance Double Surfer, 6x24.

16-foot tower trimmer.

Dusting system complete.

Erie City "automatic" 125 H. P. engine, etc., etc.

This plant is located one and one-half miles east of Marion, at the junction of C. C. & O. and Southern Railways, with siding facilities from both lines—in the midst of a number of sawmills in operation and lumber within wagon delivery limits. Plant has large steam-heated dry-kiln, good as new—plant has been operated about a year. Terms reasonable. Price, a bargain. Will not sell machinery separate. If interested, write J. W. Streetman, Marion, N. C.

FACTORY SITES

FARM LANDS

**Business Opportunities, Timber Lands,
Realty Investments**

We will take pleasure in submitting information pertaining to either of the above departments.

S. L. NUSBAUM & CO.

600 Citizens' Bank Bldg. Norfolk, Va.

FACTORY FOR SALE

ADRIAN, MICH.

Consisting of three buildings, 42,000 square feet, and three acres of ground, with engine boiler and heating apparatus. Good switching facilities. Apply

W. D. BIGGERS

1120 Penobscot Bldg. DETROIT, MICH

The Newly Formed Industry

The Established Plant That's Going to Move

or the going manufactory that contemplates starting a branch plant, will be interested in the sites we have for sale, located in Canton, the industrial suburb of Baltimore. Both waterfront and inland. The Penna. and the B. & O. run right through the property, giving unlimited transportation facilities.

These choice sites are suitable for Woodworking Plants of all kinds, Iron and Steel Plants, Machine and Boiler Works, Fertilizer and Broom Factories, Building Material Plants, and almost any other kind of industry.

We will gladly go into detail with those interested.

J. LINDSAY CLARK & CO.

State Bank of Maryland Building,

BALTIMORE, MD.

Don't Keep Used Machinery

in your warehouse;
advertise it in the
Manufacturers Record.
You will find ready
sale for any stock
you have on hand.

Notice of Public Sale by the Trustee of the Property of the

GEORGIA COTTON MILLS

of Dublin, Laurens County, Georgia

Notice is hereby given that the undersigned Trustee, under that certain Mortgage Deed of Trust executed by the Georgia Cotton Mills, a corporation of Dublin, Laurens County, Georgia, on the first day of March, 1909, recorded in the office of the Clerk of the Superior Court of the said county of Laurens in Book 54, pages 19 et seq., to secure the issue of bonds therein mentioned, and also as Trustee under that certain other Mortgage Deed of Trust executed by the said Georgia Cotton Mills on the first day of October, 1910, recorded in said Clerk's office in Book 58, pages 510 et seq., to secure the issue of bonds therein mentioned, defaults having occurred under the provisions of both mortgages, will sell at public outcry, to the highest and best bidder, and in accordance with the terms and provisions of the said Mortgage Deeds of Trust, at Dublin, Laurens County, Georgia, before the County Courthouse door, between the legal hours of sale, on the first Tuesday in December next, to wit, on Tuesday, December 4, 1911, all the property described in the said two Mortgage Deeds of Trust and mortgaged or intended to be mortgaged thereby, to wit: That tract of land containing sixty-three and sixty-five hundredths (63.65) acres, more or less, situated in said county of Laurens, State of Georgia, in the three hundred and forty-second (342) district G. M., and being a part of lot of land number one hundred and sixty-four (164), and described in a plat recorded with a deed from W. W. Robinson to the Dublin Cotton Mills, dated November 29, 1899, in the office of the Clerk of the Superior Court of Laurens County in Book 8 of Deeds, folios 54 and 55; also that tract lying in the First Land District of Laurens County, Georgia, known as the Robinson Mill Place or Lot, containing twelve (12) acres, more or less, less two (2) tracts of two (2) acres each sold off from said tract; also that tract containing two (2) acres, more or less, being in the First Land District of said Laurens County. The cotton-mill buildings and machinery of the said Georgia Cotton Mills being located on said property.

Also, all the entire textile machinery of every character located in the cotton-mill buildings on the above-described premises, comprising what is known as machinery for an eight thousand (8000) spindle mill, two hundred and sixty (260) looms, made by the Lowell Machine Shop, including the auxiliary machinery, mill fixtures, engines and boilers, belts, pulleys, shafting, tools, lathes, drills, electric-light engine and dynamo, elevator, fire apparatus and mill supplies.

All of the property of the Georgia Cotton Mills, mortgaged or intended to be mortgaged by said Mortgage Deeds of Trust, will be sold, and reference is made to the said two mortgage Deeds of Trust for a more particular and full description of the said property.

Said sale being made in order to collect the principal and interest of all of the bonds secured by said two mortgages, and all taxes, disbursements, incident to the preservation and protection of said property, expenses, fees, commissions and costs, as provided in said two mortgages.

Terms cash. Purchaser paying for title.

This August 28, 1911.

THE CITIZENS' AND SOUTHERN BANK,

By M. B. Lane, President.

Trustee,
Savannah, Georgia.

ADAMS & ADAMS,

Attorneys for Trustee,
Savannah, Ga.

BOILER, DERRICK, DRILL, ENGINE FOR SALE

One 80 H. P. Roberts Water-Tube Boiler.
One 25 H. P. Erie Engine, complete, with governor.
One F-32 Ingersoll-Sargent Rock Drill, with steels.
One Steel Derrick, 81-foot boom, steel bull wheel, plow steel cable.

Address SEARING WILSON, 515 Penna. Bldg., Phila.

LIST OF PLANT

At Cambridge City, Ind., on the Pan Handle Railroad
FOR SALE

- 2 70-ton Bucyrus Steam Shovels.
- 6 H. K. Porter Locomotives, 9x14, 3-ft. gauge.
- 1 H. K. Porter Locomotive, 10x16, 3-ft. gauge.
- 1 Baldwin Locomotive, 9x14, 3-ft. gauge.
- 21 3-yd. Ryan & McDonald One-way Dump Cars, 3-ft. gauge.
- 54 4-yd. Ryan & McDonald One-way Dump Cars, 3-ft. gauge.
- 1 Wooden Water Tank.
- 10,000 Narrow-gauge Ties.
- 11 Frogs and Switches, 60-lb. Rail.
- 1 ¾-yd. McKelvey Concrete Mixer.
- 2 ½-yd. McKelvey Concrete Mixers.
- 3 Guy Derricks, 74' mast, 65' boom, with bull wheels, guy wires, etc.
- 1 Small Stiff-Leg Derrick.
- 1 Large Stiff-Leg Derrick, with bull wheel.
- 6 Guy Derricks, 60' mast, 55' boom, with bull wheels, guy wires, etc.
- 1 Guy Derrick, 50' mast, 55' boom, with bull wheel, guy wires, etc.
- 1 3-drum Lambert Hoisting Engine, 7x10 (double engines).
- 3 Double Drum Mundy Hoisting Engines, 6½x10 (double engines).
- 3 Double Drum Mundy Hoisting Engines, 6½x12 (double engines).
- (With boilers and hoisting cables.)
- 3 Double Drum Lambert Skeleton Engines, 6½x10.
- 5 Dake Swinging Engines.
- 4 Mundy Swinging Engines.
- 1 40 H. P. Portable Locomotive Boiler.
- 6 Vertical Boilers.
- 1 Air Pump.
- 1 Receiver.
- 1 Wood Boring Machine.
- 2 Edson Pumps.
- 3 Small Horizontal Steam Pumps.
- 3 No. 6 Morris Centrifugal Pumps.
- 1 No. 5 Morris Centrifugal Pump.
- 4 Galvanized Water Tanks.
- 6 Ideal Concrete Buckets.
- 3 Eclipse Concrete Buckets.
- 16 Side Dumping Buckets.
- 1 Double Line Owen Clamshell Bucket, 1 cu. yd. capacity.

P. F. BRENDLINGER, Contractor
1009 Arcade Building PHILADELPHIA

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FACTORY SITE AND BUILDINGS FOR SALE

By firm that wishes to move nearer supplies of special raw material. One-story brick machinery building, 45x160, with 32x66 wing; two-story frame metal-roof factory building, 40x180; one-story frame warehouse, 40x180; brick boiler-house with extra high brick stack; two 60 H. P. boilers and one 80 H. P. boiler; Stanwood & Gamble engine, shafting and dust collector in place if desired; three acres of yard room; eight-car railway siding, and site for wharf to river channel. Located in Petersburg, Va., a city with three trunk-line railways and two lines of steamers.

In the same city, for sale by the same firm, a factory site about 190x250; one two-story frame metal-roof factory building, 30x120, and brick boiler-room and stack; railway siding; located in growing part of city, near large factory population.

For factory advantages of city, note that it is site of three large branches of American Tobacco Co., recently moved there; of largest American trunk factory, and of numerous woodworking and textile mills.

For particulars address "Factory Site," care Manufacturers Record.

Small Hosiery Mill FOR SALE

fully equipped for making ladies' and men's hosiery. Capacity, 55,000 dozen per year. Now running on 15c. and 25c. half hose. Has reputation for making exceptionally good hose. Steam power. Room to enlarge. Good labor plentiful. No money required if purchaser can give proper security. Fine opportunity for anyone wishing to purchase small hosiery mill on easy terms. Brand and good-will included in sale.

For particulars address

THE STEELE HOSIERY MILL
STATESVILLE, N. C.

10,000 Acres Pine, Gum and Cypress Timber Land FOR SALE

10,000 acres fine timber land—Pine, Gum and Cypress. Will cut 40,000,000 feet. Six to twenty years cut. Timber of finest quality. Located on railroad and river. Mill, nearly complete, including two Drykilns, Planing Mill, Shingle Mill, etc. None of the timber over five miles from mill. Cheap logging. Freight rates to Virginia gateway, 12 cents. For further information address

"TIMBER,"

P. O. Box 323, Fayetteville, N. C.

Centrifugal Pump Business FOR SALE

A Centrifugal Pump Business, established thirty years. Will sell patterns, templates, good will, machinery and plant, all or any part.

ADDRESS

VAN WIE PUMP CO.
SYRACUSE, N. Y.

Stone Quarry & Crushing Plant FOR SALE

Location, Wake county, North Carolina. Steady demand for entire output at good prices. No other quarry in this section. Capacity, 300 tons crushed stone per day. Will sell cheap.

AMERICAN STONE CO.,
P. O. Box 538, Richmond, Va.

WANTED

Location for Silk Mill

Silk Mill.—An old-established firm wishes to start a branch mill in the Middle South where plenty of good labor and cheap power can be obtained. Would employ 300 or more. Give full particulars in reply. Address Silk Co., care Manufacturers Record.

THREE COTTON MILLS FOR SALE

The plants of the three following Cotton Mills, in bankruptcy, located in and near Griffin, Georgia, will be sold separately under sealed bids, and under orders of Court at the Office of the Referee in Bankruptcy in Griffin, Georgia, at twelve o'clock Tuesday, November 7, 1911:

Spalding Cotton Mills, 9934 Spindles;

Central Mills, 7168 Spindles;

Boyd-Mangham Manufacturing Co., 13,888 Spindles,

together with all real estate, mill buildings, tenants' houses, furniture and fixtures. For detail information and further particulars, address any of the undersigned.

T. D. MEADOR, Atlanta, Ga.,

JOHN K. OTTLEY, Atlanta, Ga.,

ROSWELL H. DRAKE, Griffin, Ga.,

Trustees in Bankruptcy.

Bankrupt Sale of Valuable Coal Lease and Plant of Atlas Pocahontas Coal Company in the Pocahontas Coal Fields of West Virginia

Notice is hereby given that in pursuance of an order entered on the 9th day of September, 1911, in a bankrupt proceeding pending in the District Court of the United States for the Southern District of West Virginia, entitled "In the Matter of Atlas Pocahontas Coal Company, in Bankruptcy, No. 211," the undersigned, Trustee in Bankruptcy, will, on the 15th day of November, 1911, offer for sale at public auction to the highest bidder, unless sold at private sale before that time, at the front door of the building lately used and occupied by The Atlas Pocahontas Coal Company as a commissary or storehouse on the lease of the said Atlas Pocahontas Coal Company at Antler, in McDowell County, West Virginia, the following leasehold estate and property of the said Atlas Pocahontas Coal Company, namely:

That certain lease and leasehold estate owned by The Atlas Pocahontas Coal Company, containing about 500 acres, with all mining rights and privileges owned by said Company thereunder, along also with all storehouses, tenement-houses and other buildings, and all sidings, tracks, rails, etc., located on said lease, including also all mine cars, pipe, compressors, fans and other machinery on said lease owned by said Company.

This property is located in the great Pocahontas Coal Fields of West Virginia, in McDowell County, on the Norfolk & Western Railroad, near Welch, West Virginia, and is underlain with two valuable seams of coal.

Splendid opportunity for anyone desiring to engage in the coal-mining business. Terms of Sale: The personal property on the lease will be sold for cash unless sold along with the lease. The leasehold and personal property, if sold with the lease, will be sold for one-third cash, one-third in thirty and one-third in sixty days, the purchaser giving his notes for the deferred payments with approved security.

For further information apply to the undersigned trustee.

E. C. MARSHALL, Trustee,
Welch, West Virginia.

Complete Saw Mill Plant, Dry Kiln and Logging Equipment FOR SALE

Mill has a daily capacity of 25,000 feet. Logging outfit consists of Locomotive, three and one-half miles of tramroad and six log trucks. Eighteen to twenty million feet of choice Pine timber, well blocked. Mill located about 35 miles south of Savannah, on the Seaboard Air Line Railway. Fifteen to twenty million feet additional timber can be had in easy reach of this plant. For full particulars address

ALBERT FENDIG & CO., Brunswick, Ga.

30-Ton Triumph System Ice Plant For Sale

Complete and in shipshape. Installed in reinforced concrete building and near the heart of the city of Sweetwater, Texas, the best and fastest-growing city in Texas west of Fort Worth. Six thousand people now. Three trunk-line railroads. Shops and general division of the Santa Fe cut-off from Galveston to the Pacific Coast. Negotiating now for icing contract with Santa Fe. Interested in an ice plant that will make money? Better investigate this. We want to give our attention to water-works improvement only. No other plant here. Address BEN ANTHONY, Sweetwater, Texas.

GAS PLANT WANTED

Elizabeth City, North Carolina, population about nine thousand (9000), will on November 9th, 1911, at 7.30 P. M., hear proposals from all those who want franchise to install gas plant.

Address J. B. FLORA, Mayor.

POWER PLANT FOR SALE

Consisting of 100 K. W. Jeffrey Generator, 16"x16" McEwen Automatic Engine and 150 H. P. H. R. T. Boiler; 1 large motor-driven Mine Hoisting Engine, and 100-ton Howe Track Scale equipped with patent registering beam. Address

M. B. PARKER,
1912 Oak St., Chattanooga, Tenn.

AUCTION SALE OF

Valuable Property in Norfolk, Va.

By virtue of two decrees entered, respectively, on July 13, 1911, and July 29, 1911, in the suit pending in the Court of Law and Chancery of the City of Norfolk, entitled William Thomas Core and others against Bovee Dodds Core and others, we, the undersigned, who were appointed Special Commissioners for that purpose, will sell at public auction at the Norfolk Real Estate and Stock Exchange, Plume street, Norfolk, Virginia, on

TUESDAY, OCTOBER 24th, 1911, at 12 M.

the following real estate, located in the City of Norfolk, Virginia, of which John H. Core died seized and possessed:

Those certain tracts or parcels of land containing in the aggregate 85.155 acres, more or less, lying along Armistead Bridge road, adjoining Ghent, as laid down on a plat filed as "Exhibit C" with the bill in the above-mentioned suit made by W. T. Brooke, City Engineer, for John H. Core, in July, 1908, reference being made to said plat for a more particular description of the land.

Sales are to be made subject to confirmation by the above-mentioned Court.

The terms and conditions of sale and plats showing said property can be obtained from any of the undersigned Special Commissioners or Auctioneers.

WM. W. OLD, JR.,

A. W. PATTERSON,

L. CLAY KILBY,

Special Commissioners.

H. C. HOGGARD & CO.,

STEPHENSON & TAYLOR,

C. N. WHITEHURST & CO.,

Auctioneers.

Sash, Door and Blind Factory

FOR SALE

Machinery, tools, fixtures and good-will of a factory making sash, blinds, doors and other building material in one of the largest and most progressive cities in the South. It is one of the best equipped factories in the South and has an established reputation for high-grade work. For further information address Manufacturer, care Carrier No. 1, Richmond, Va.

FOR SALE

October 31, 1911

Under Decree of the U. S. Court, Norfolk

The Site of the Jamestown Exposition, near the City of Norfolk, Va., about three hundred and thirty acres, fronting more than a mile on Hampton Roads, just opposite Old Point Comfort, and adjoining the property of the Virginian Railway in its rear, including many permanent buildings adapted for manufacturing and residence purposes, and piped for water and sewerage.

To be offered in parcels and as a whole.

For full information apply to any of the undersigned Commissioners of Sale.

JOHN L. JEFFRIES

RICHARD H. BAKER

ROBERT B. TUNSTALL

H. H. RUMBLE

R. M. LETT

O. D. BATCHELOR

NORFOLK, VA.

NEWPORT NEWS, VA.

Bargains in Machinery and Supplies.

Rebuilt Engines and Boilers

Engines—Corliss.—15x43 Lane & Bodley, 15x36 Ohio Heavy Duty, 16x42 Atlas, 15x30 Lane & Bodley.

Engines—Automatic.—14x24 Buckeye, 11x16x12 Buffalo Compound, 13x15 Taylor, 13x16 Atlas, 13x12 Harrisburg-Ideal, 13x12 Phoenix, 12x14 Green, 12x12 Armstrong & Sims, 11x16 Atlas, 10x12 Valley, 8x14 Noyes.

Engines—Throttling.—18x24 Atlas, 14x18 Sinker-Davis, 14x14 Lewis Vertical, 12x16 Reed, 12x14 Brownell, 10x16 Base, 10x12 Atlas, 9x14 Lane & Bodley, 8x10 Erie, 6x8 Industrial.

Boilers—Stationary.—72x18, 66x16 High-Pressure, 72x18 Standard, 72x16, 66x18, 60x16, 60x14, 54x14, 48x14, 44x14, 42x12, 36x16, etc.

Boilers—Fire Box.—100, 80, 60, 50, 40, 35, 30, 25, 20, 16, 12, 10 and 8 H. P., etc.

Boilers—Vertical.—50, 40, 35, 30, 25, 20, 16, 12, 10, 8, 5 and 3 H. P., etc.

Heaters.—All sizes, Open and Closed.

Pumps.—All sizes, Single and Duplex.

Electrical.—30 K. W. Generator, direct connected to 8x10 Skinner Engine; 20 K. W. Generator, direct connected to 8x10 Economic Engine; 15 K. W. Belted Generator.

Miscellaneous.—Sawmills, Lath Mills, Edgers, Cut-off Saws, Re-Saws, Blowers, Exhaust Fans, Tanks, etc. Write for list. Also full assortment of new machinery.

Sole manufacturers of the celebrated "Lender" Injectors and Jet Pumps. Send for circular.

THE RANDLE MACHINERY CO.

1734 Powers Street CINCINNATI, OHIO

Second-Hand Machine Tools For Sale at Bargain Prices

LATHES

One 24"x8" Five-Step Cone-Head q. c. g. Lodge & Shipley Engine Lathe.

One 3 1/2"x60" Fitchburg Lo-Swing Lathes.

One No. 3 Lodge & Shipley Rapid Reduction Lathe with 8' bed.

PLANERS

One 36"x36"x10' Three-Head Sellers.

One 26"x36"x26" Four-Head Sellers.

One 42"x42"x20' Single-Head Putnam.

MISCELLANEOUS

One Whiton Revolving Centering Machine.

One Franklin Cold Saw, 3/4" capacity.

Two No. 3 Nutter-Barnes Cold Saws, 6" capacity.

One Schuster 1/4" Riveter, Model "A."

One Mumford 12"x40" Power Ramming Molding Machine.

One Globe Power Hack Saw, 8" capacity.

One Universal Power Hack Saw, 6" capacity.

THE LODGE & SHIPLEY MACHINE TOOL CO.

Cincinnati, Ohio, U. S. A.

WE BUY

AND

DISMANTLE

Factories

Mills

Machine Shops

and all kinds of

Industrial Plants

We are always in
the market to buy

Scrap Iron and Steel

OF EVERY KIND

FRANK SAMUEL

Harrison Building

15th and Market Streets

PHILADELPHIA, PA.

IN STOCK

Immediate Delivery, Rebuilt and Guaranteed

One (1) 2" Acme Bolt Cutter.
One (1) 1 1/2" Acme Bolt Cutter.
One (1) 1 1/2" Acme Bolt Cutter.
Two (2) 26" Barnes B. G. P. F. S. H. Drills.
One (1) 20" Prentice W. F. Drill.
One (1) 16" Niles W. F. Drill.

LATHES

One (1) 26"x13' Fifield, triple-gear, practically new.
Three (3) 25"x12' Davis H. S.
Two (2) 22"x12' Schumacher & Boye.
One (1) 22"x12' Dietz & Gang.
Two (2) 20"x11' Wright.
One (1) 20"x11' New Haven.
One (1) 18"x8' Hendey T. A.
One (1) 16"x8' Harrington.

SHAPERS

Two (2) 28" Juengst.

One (1) 20" Cincinnati.

Two (2) 15" Smith & Mills.

MISCELLANEOUS

One (1) 150-ton Sellers Wheel Press.

One (1) 48" Bement Car Wheel Boring Mill with Crane.

Three (3) Bement Keyseaters.

One (1) 14" Mitsu & Merrill Keyway Cutter.

One (1) 14" Newark Slotter.

One (1) 40"x8' Newark Blisse Horiz. Boring Mill.

Six (6) Sellers and Niles Axle Lathes.

One (1) 30" Long & Alstatter Punch and Shear.

Two (2) 20" Higley Cut-off Saws.

Chaser Grinder.

Two (2) 500 lbs. Merrill Board Drop Hammers.

One (1) 25 lbs. Bradley Helve Hammer.

One (1) 500 lbs. Bement Steam Hammer.

Coulter & McKenzie Spring Tapering Machine.

Large number of Spring Benders, Spring Eye and Bending Machines.

One (1) set 5' Boiler Rolls, 3/4" capacity.

43" Boiler Roll, hand driven.

Merrill Trimming Press.

Two (2) 25" gap Allen Pne. Riveters.

Grinders, Saws, Emery Wheels, Anvils, Flat-ters, etc., etc.

Send for Special List. Large stock of Boilers, Engines and General Machinery.

Note my adv. in last week's issue.

HERMAN L. WINTERER,

908-910 Beach St., Philadelphia, Pa.

100 H. P. Engine

FOR SALE

One McEwen Center-Crank Engine, 13x14, normal 100 H. P. This engine is in the very best of condition and is for immediate delivery. Will sell at less than real value to quick buyer.

ELECTRIC LIGHTING PLANT,
Johnston, S. C.

Gas Power and Electrical Equipment

FOR SALE

A 105-horse-power "Otto" Gas Producer Engine; engine, dynamo, producer, switch-board and electrical equipment, complete. Erected one year ago. No expense was spared to make this a model installation. Particulars and description can be found on page 120 of the March number of "Metal Industry." Can be inspected upon application.

THOMAS A. PAINTER,

79 Eighth Ave., New York.

GOOD MODERN MACHINE TOOLS

FOR

IMMEDIATE DELIVERY

40"x8 Newark "Binze" Horiz. Boring Mill.
72" Keystone Horiz. Boring Mill.
60" Niles Horiz. Boring Mill.
40" Bridgeport Vertical Boring Mill.
30" Colburn Vertical Boring Mill.
50" Niles Car Wheel Boring Mill.
50x21" Niles Heavy-Duty Engine Lathe.
25x14" Draper Engine Lathe, C. R. Taper.
26x13" Fifield Heavy-Duty Engine Lathe.
30x14" Pond Engine Lathe.
25x12" Davis Engine Lathe.
No. 2 Brown & Sharpe Uni. Milling Machine.
No. 2 Putnam Universal Milling Machine.
No. 1 Brown & Sharpe Uni. Milling Machine.
No. 9 Kempsmith Plain Milling Machine.
Lot Small Plain Milling Machines.
2x2 1/2" Jones & Lamson Flat Turret Lathes.
2 Cleveland Auto. Screw Machines, 1 1/2" cap.
3 Cleveland Auto. Screw Machines, 1 1/2" cap.
3 Cleveland Auto. Screw Machines, 1 1/2" cap.
2 1/2" Hamilton Back-Geared Shapers.
28" Juengst Back-Geared Shapers.
12, 14, 16" Shapers.
48x7" Pond Plainfield Planer.
24x24x26 Woodward Powell Planer.
14" Industrial Wks. Slotter.
4" Gang Radial Drills.
Niagara Large Multiple Punch.
P. 4 Ferracute Power Presses.
No. 2 Brown & Sharpe Universal Grinders.
No. 3 Landis Universal Grinders.

J. NUTTALL

1744-1750 N. Fifth St., Philadelphia, Pa.

Machinery Bargains

1 20"x45" Reynolds Corliss Engine.
1 14"x12" Frazer & Chalmers Corliss Engine.
3 50 H. P. Fairbanks-Morse Gasoline Engines.
1 18 1/2"x8 1/2"x10 Worthington Duplex Steam Pump.
2 14x8x12 Canton-Hughes Duplex Steam Pumps.
1 60" Sturtevant Heating Fan and 1500 ft. 1" Pipe Colls, direct connected to 5x5 Vertical Engine.
1 80" Sturtevant Heating Fan with 2500 ft. 1" Pipe Colls.
3 60"x16" Horizontal Tubular Boilers, 125 lbs.
2 42"x14" Horizontal Tubular Boilers, 125 lbs.
5 72"x20" Horizontal Tubular Boilers, 100 lbs.
200 High-grade Vault Doors.
200 1000 to 8000-gallon capacity Tanks.
Write for our Bargain List No. 229.
CHICAGO HOUSE WRECKING CO.
35th & Iron Streets, CHICAGO, ILLINOIS

A Bargain in Brick Machinery

Having decided to install dry-press machinery, we are offering a most complete outfit of J. C. Steele & Sons No. 3 equipment for making end-cut stiff-mud brick, together with boiler and engine. All is practically new and in first-class running condition, and is a real bargain to anyone who is going into the brick business. For further information address

KENBRIDGE BRICK WORKS,
Kenbridge, Va.

Brick Machinery for Sale

One Stiff Mud Brick Machine, 20,000 to 20,000 capacity.
One Disintegrator.
One Pug Mill.
One Automatic Cutting Table.
All Steele's make.
Address COLUMBIA BRICK CO.,
P. O. Box 208, Lake City, Florida.

SAW AND ENGINES FOR SALE

One Second-Hand J. A. Fay & Egan Co. No. 16 Band, Rip and Resaw, practically new.

ALSO

Four Steam Engines, various sizes.

The Ober Mfg. Co., Chagrin Falls, Ohio

HOWARD W. READ COMPANY

3d and Arch Sts.
PHILADELPHIA, PA.

Boilers, Engines, Pumps

Hoisting Engines

Every Size and Every Duty

Immediate Shipment
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Are as Standard as Steel Rails
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140 H. P. Economic, 100 lbs. steam.
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140 H. P. Economic, 100 lbs. steam.
SPECIAL—Cheap before removal.
100 H. P. Horizontal Return Tubular, 125 lbs. steam, with Wilkinson Stokers.
Large stock of return tubular and vertical types, all sizes.

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- 25"x48" Reynolds. 25"x60" Corliss.
24"x48" Cooper Tandem Compound.
24"x48" Greene. 20"x42" Greene.
20"x30" Macintosh & Seymour.
16"x38" Bates.
14"x32" Watts-Campbell.
14"x30" Russell. 12"x22"x42" Greene.
12"x24" Buckeye.
Large stock of smaller sizes; also automatic and plain slide-valve, vertical and horizontal.

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- 24"x30" Rand Single Straight Line, 1300 cu. ft.
24"x30" Ingersoll-Sargeant Straight Line, Class A, 975 cu. ft.
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10"x10" Blaisdell Single, 135 cu. ft., belt driven.
Large stock of smaller sizes.

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- 15 K. W. 250-volt D. C. Westinghouse, direct connected to 19"x44"x48" Greene-Wheelock Engine.
15 K. W. Fort Wayne, 230-volt, D. C. direct connected to 14"x16"x22"x16" Ide Tandem Comp. Engine, 204 R. P. M.
10 K. W. 125-volt D. C. Westinghouse, 6-pole, direct connected to 10"x18"x10" Westinghouse Compound Engine, 315 R. P. M.

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- 20 K. W. 250-volt Western Electric, 6-pole, belt driven, 500 R. P. M.
Large stock of Dynamos, Motors, all sizes.

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7"x10" Ryan & McDonald, D. C., D. D.
7"x10" Copeland & Bacon, D. C., S. D., with base fitted for boiler.
6"x10" Flory, D. C., D. D., with 36"x7" boiler.
6"x10" Davis, S. C., S. D.
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12"x20"x12" Westinghouse Compound, 100-180 H. P.
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20"x12" Lodge & Davis.
16"x8" Rahn-Carpenter.
15"x8" Carroll-Jamelson.
15"x8" Carroll-Jamelson.
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Two 17"x8" Greaves & Klausman.

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About 20 Lincoln Type Milling Machines.

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20" Smith & Mills. 14" Steptoe.

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PG-5 Ferracute. No. 3 Bliss Geared.
No. 3 Bliss Geared.

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20" Plain.

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1 22 and 36-60 Tandem Corliss.
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1 Allis Corliss Tandem, 22 and 24x18 Engine.
Engines direct connected to generators.
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16x8 Fay & Scott, plain rest, P. C. F.
18x8 Lodge & Shipley, patent head chuck.
20x8 McMahon, compound rest, chuck.
20x8 Fay & Scott, compound rest, P. C. F.
24x14 Reed, high speed.
27x12 Pratt & Whitney, C. R., P. C. F.
28x10 Putnam, C. R., P. C. F.
28x10 Gleason, compound rest, taper.
30x12 Pond, C. R., P. C. F.
32x17 Bement-Miles, C. R., triple geared.
36x16 Reed, compound rest, P. C. F.
40x18 Newark, triple geared, C. R., P. C. F.
46x38 Fitchburg, T. G., C. R., P. C. F.
102x35 Bement, compound rest, T. G.
21x14 Powell, compound rest, P. C. F.
24x14 Niles, compound rest, P. C. F.
26x13 Fitchburg, compound rest, P. C. F.
84x20 Fitchburg, C. R.

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- 2x24 Jones & Lamson, flat turret.
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No. 2 1/2" Garvin, wire feed, friction head.
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3" National Acme, automatic.
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No. 24 Brainerd, plain, back gears.

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10-spindle Gardam, adjustable.
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30" Gang, plain radial.
5" Baugh, plain radial.
7-spindle Slate, bedstead.

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15" and 20" Hendey, friction.
13" Lodge & Davis, crank.
28" Cincinnati, geared.

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Grinder, Sellers, universal tool.
Planer, 36x36x8 Betts, 1 head.
Planer, 26x26x8 Pond, 2 heads.
Planer, 36x36x12 Betts, 4 heads.
Planer, 48x48x8 Farrell, 1 head.
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Gas Engine, 8 H. P. Fairbanks.
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- 1—26 H. P. Huber Traction Engine No. 8277.
- 2—18 H. P. Huber special length Contractors' Traction Engines, Nos. 9020 and 9027, Newburgh, N. Y.
- 1—Freese Cutting Table, practically new (16 cuts.)
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- 1—10-ton Aveling-Porter Steam Roller.
- 1—600-gal. Studebaker Sprinkler Wagon.
- 2—450-gal. Studebaker Sprinkler Wagons.
- 2—No. 4 Champion Crushers.
- 1—No. 4 B Gates Crusher, with extra head, shaft eccentrics, etc.
- 1—40 H. P. Nagel Boiler, with engine mounted.
- 1—110 H. P. Boiler, with 75 H. P. Atlas Engine, Ligonier, Pa.
- 1—20 H. P. Porter Donaldson Economic Boiler.
- 1—20 H. P. Erie Economic Boiler, Newburgh, N. Y.
- 1—1 1/2 H. P. Gas or Gasoline Fairbanks Engine.
- 1—Epping Carpenter, No. 6 single plunger pump, No. 1465, 10x6x12; in good order.
- 1—Pittsburgh Water Heater, 8" exhaust (suitable for 200 H. P.)
- 4—C No. 3-5 H. P. Gasoline Pumps, 4 1/2" diameter, brass cylinder, 6-inch stroke, Newburgh, N. Y.
- 1—Wilson-Snyder Duplex Pump, No. 1866, 10x6x15.
- 1—No. 6 Marsh Feed Pump, 5x3x6, No. 19849; good order.
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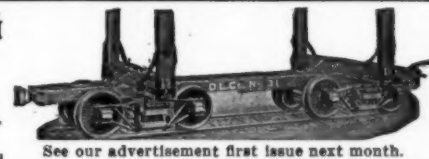
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All in stock in Philadelphia, ready for immediate duty.

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of all kinds, for all purposes



Style 60

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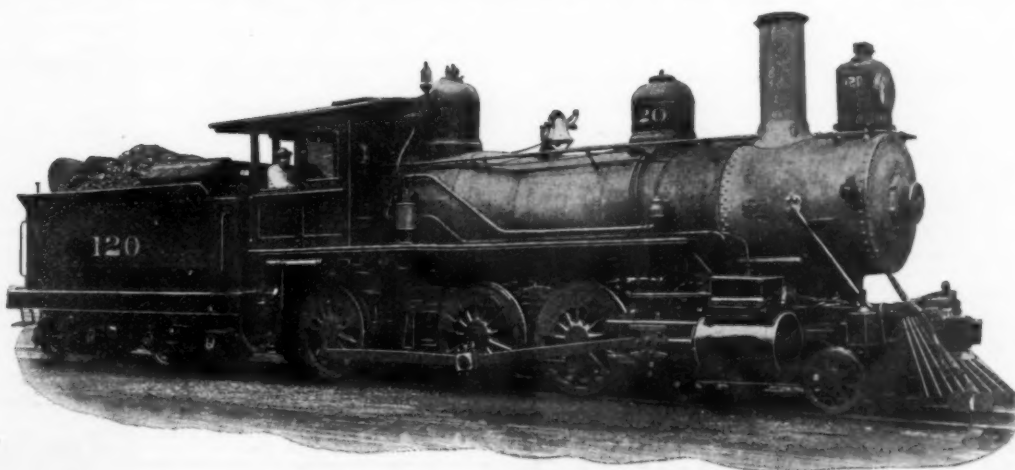
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View of a section of Percival reinforced concrete ties on the Florida East Coast Ry., installed near St. Augustine, Fla., May, 1906. Under date of Sept. 6th, 1911, after 5 years and 4 months' use, they write that all screw spikes are tight down on flanges of rail, and seem never to have required tightening. Cushions seem perfectly sound.

THE PERCIVAL PATENTS

In use under various Trunk Line Railways for five and six years past.

Read What They Say:

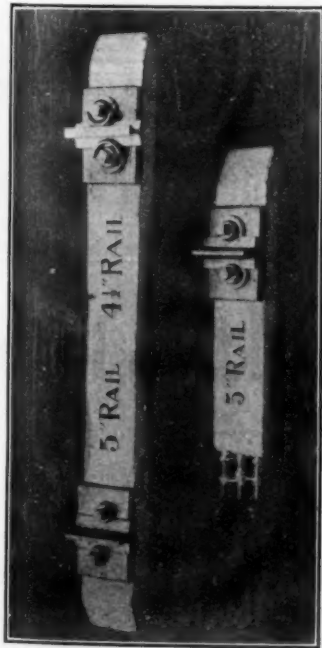
"Installed October, 1906, and from reports of our roadmasters are in good condition."

Another Road Reports:

"These ties have been frequently examined and their condition found good in all respects. All screw spikes tight and have never been touched since their installation in 1906."

"Ties have been frequently examined. Condition as good as when placed."

Note the spiking device.



This cut illustrates the Universal Reinforced Concrete Tie.

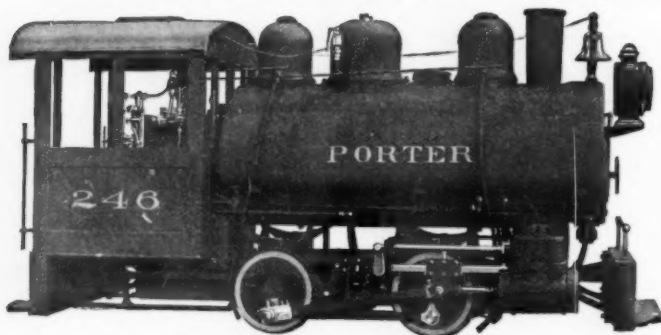
This illustrates a section of the Galveston, Harrisburg & San Antonio Ry., equipped with Percival Reinforced Concrete Ties, installed near Galveston, Tex., in Oct., 1906. Track at this point sustains very heavy traffic, trains frequently making 60 miles per hour as when this photo was taken.

This illustrates same point as cut opposite, and was taken after a severe freight wreck where most of train jumped track and passed over these concrete ties. We have certificates from the Railway officials showing that the track was found true to gauge after this wreck, and that several months later part of these ties were removed on account of their bad appearance of broken ends.

Universal Concrete Tie Co.
of Louisiana

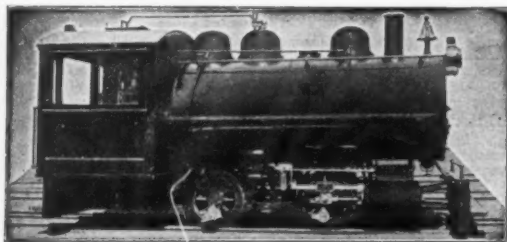


H. E. Percival, Inventor of the Percival Ties, Spiking Devices, etc., Supt. of Construction, Universal Concrete Tie Co., New Orleans.

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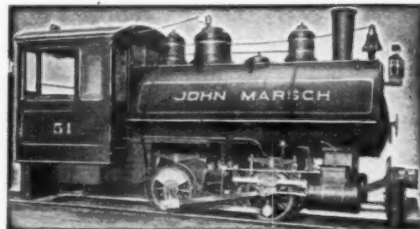
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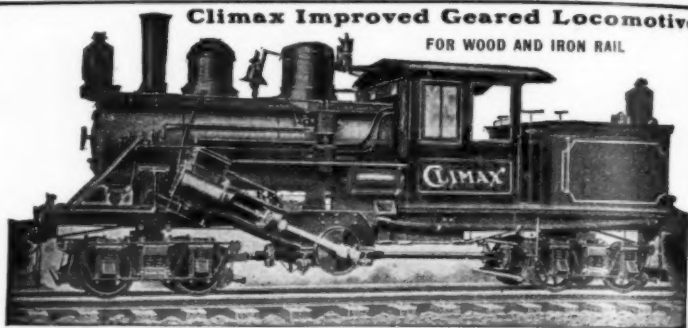
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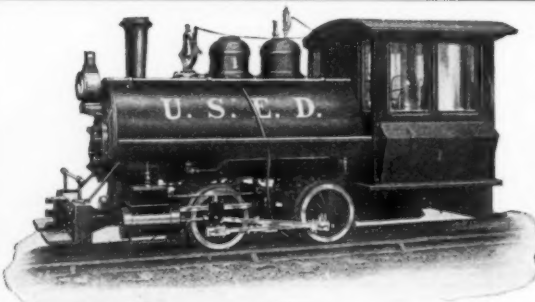
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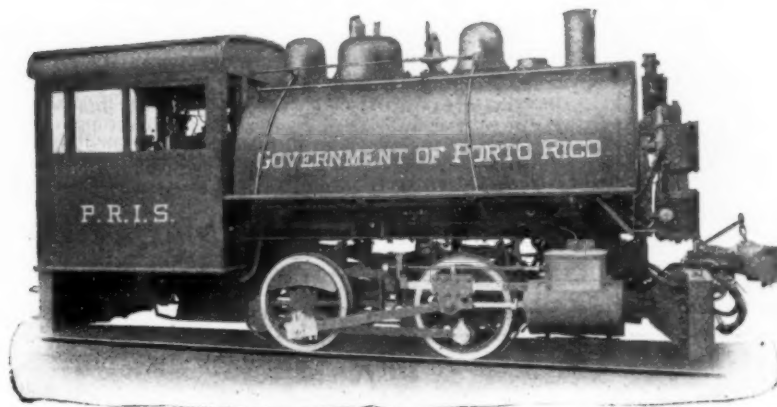
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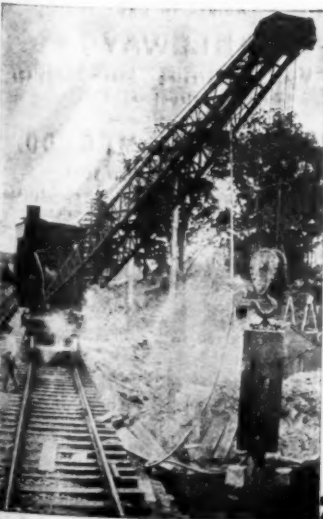
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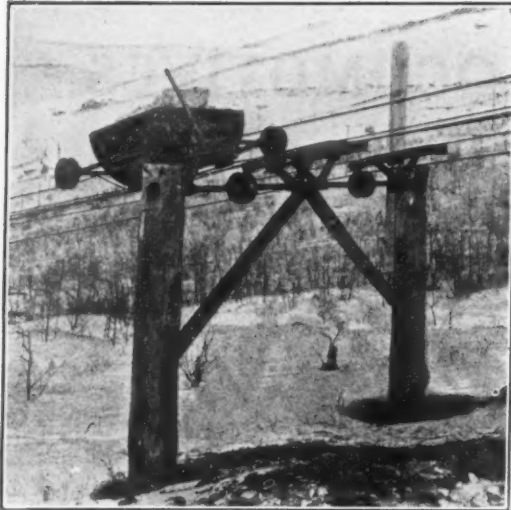
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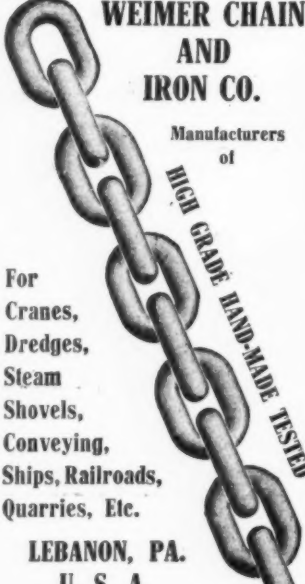
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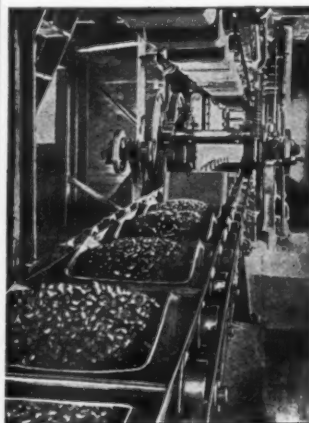
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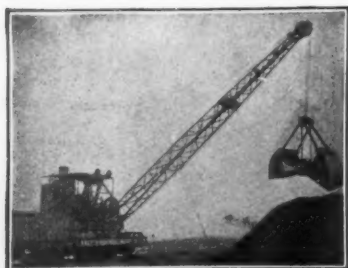


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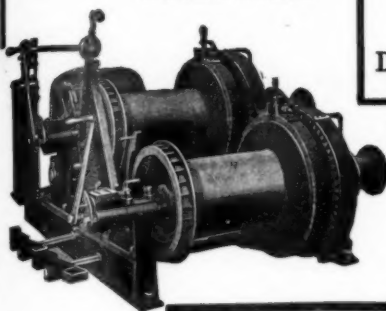
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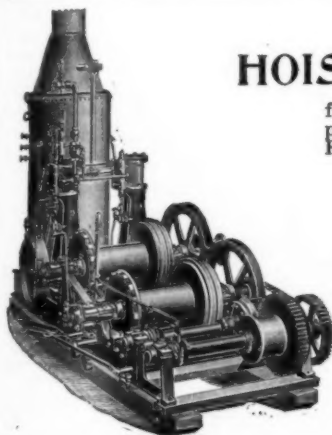
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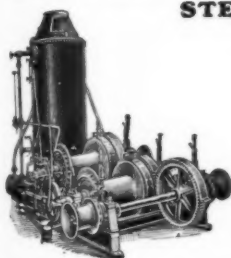


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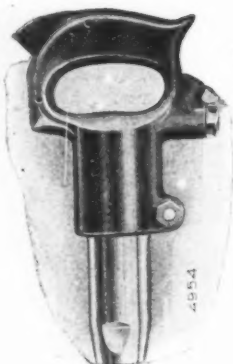
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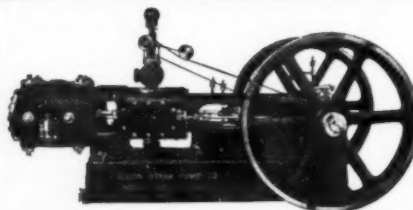
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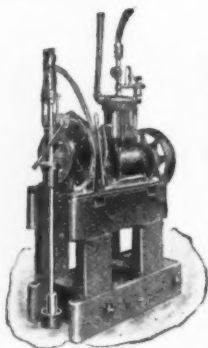
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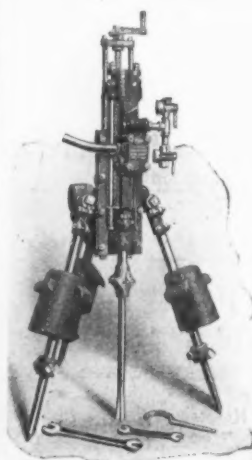
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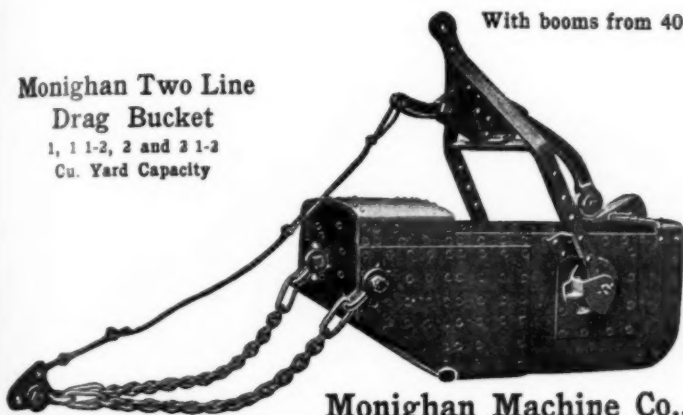
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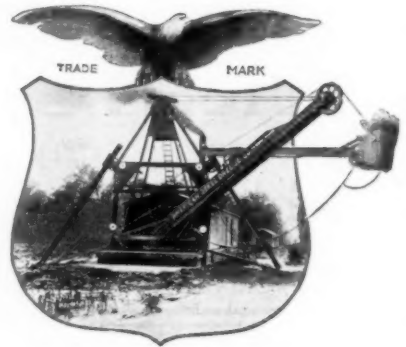
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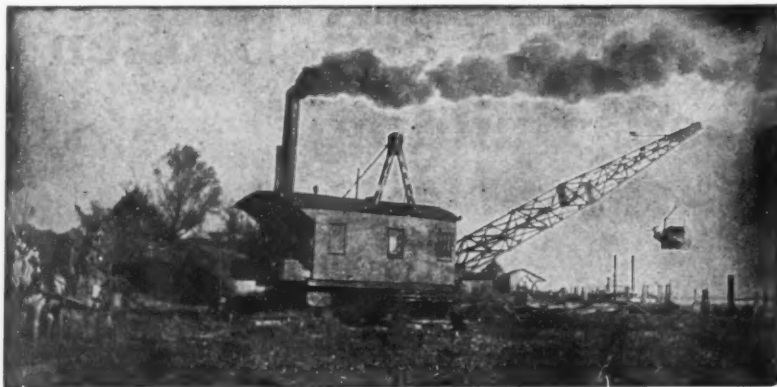
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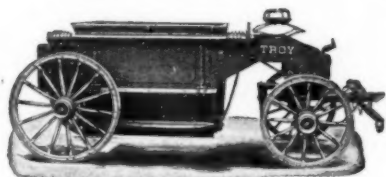
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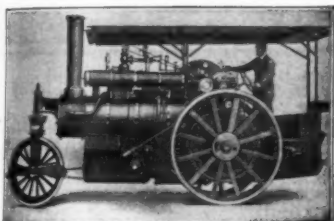
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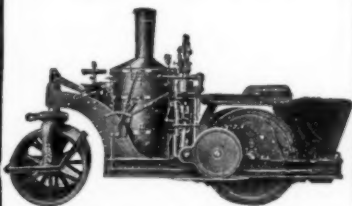
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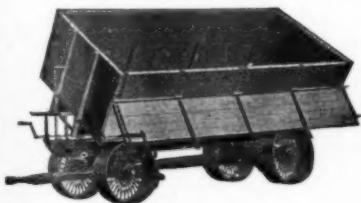
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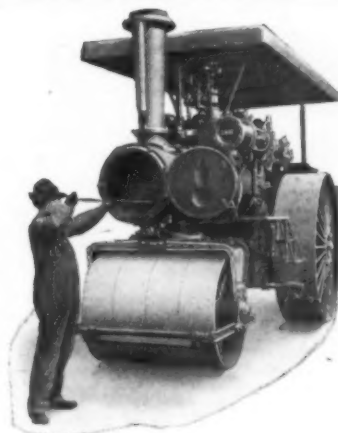
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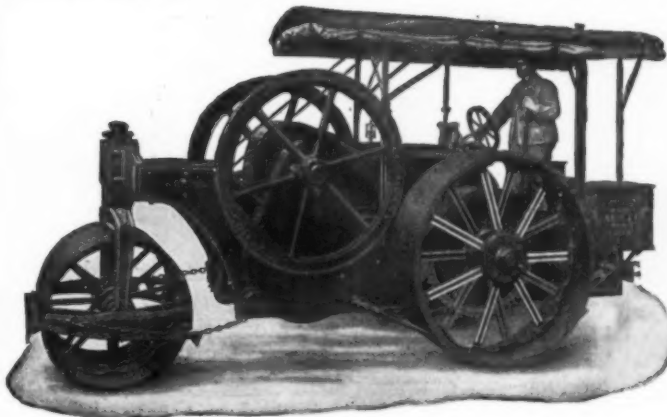
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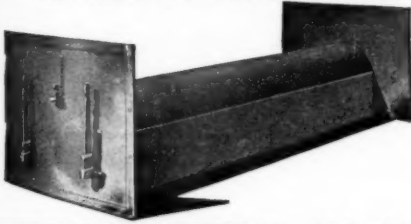
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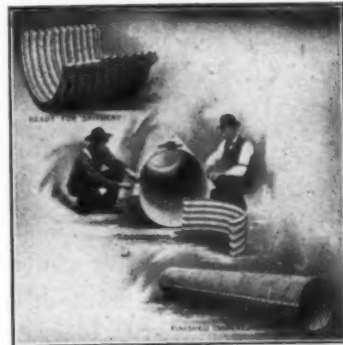
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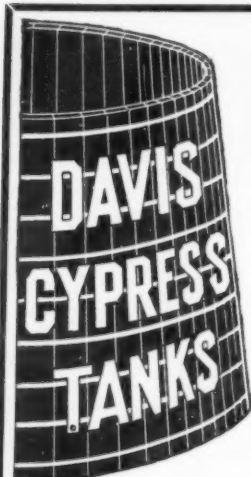
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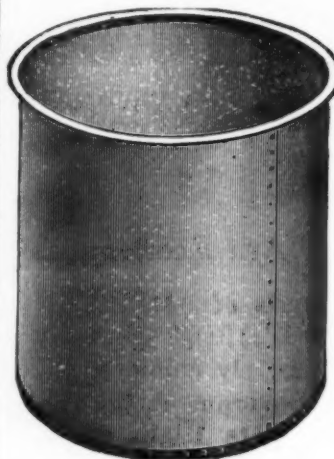


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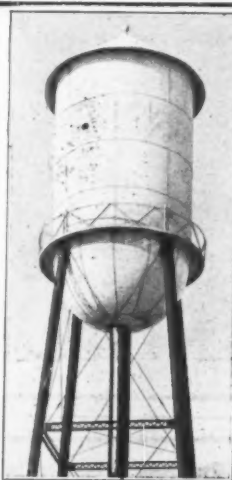
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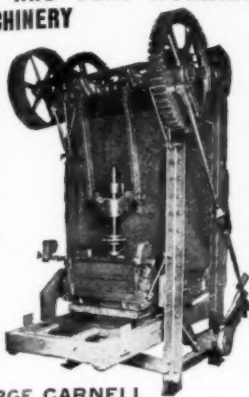
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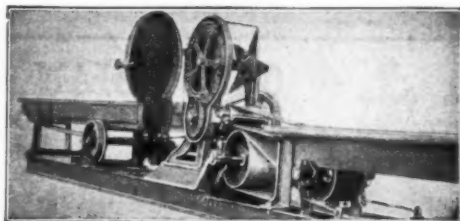
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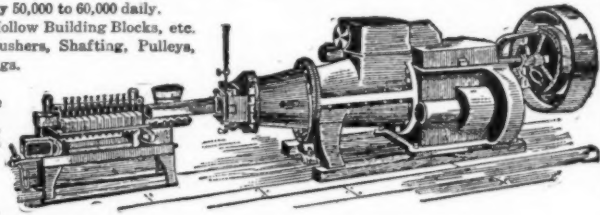
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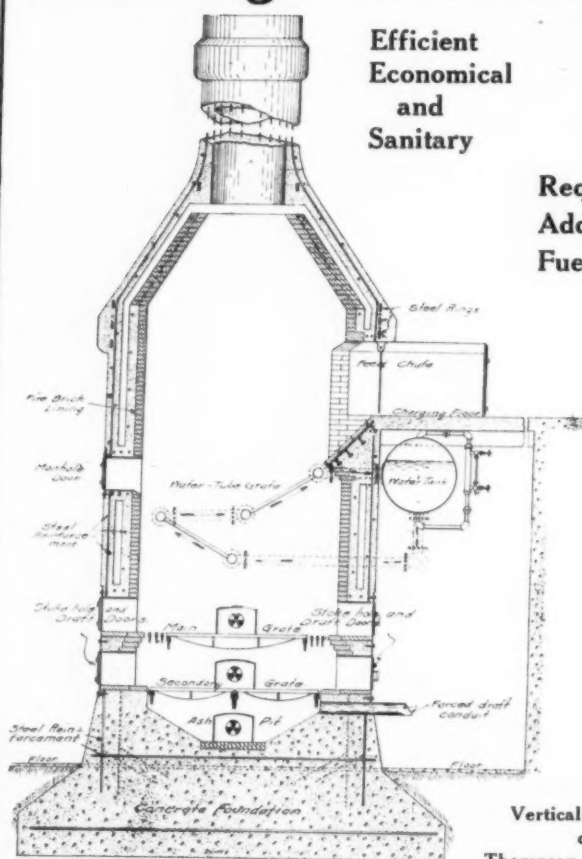
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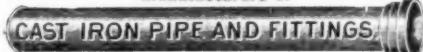
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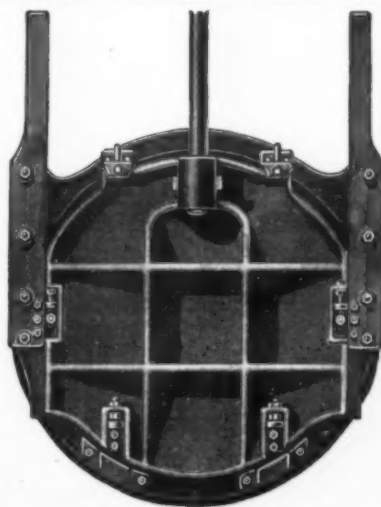
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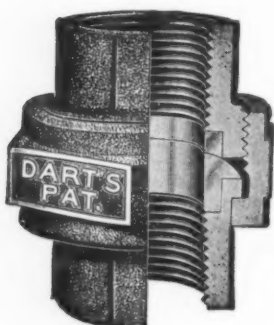


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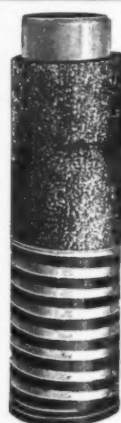


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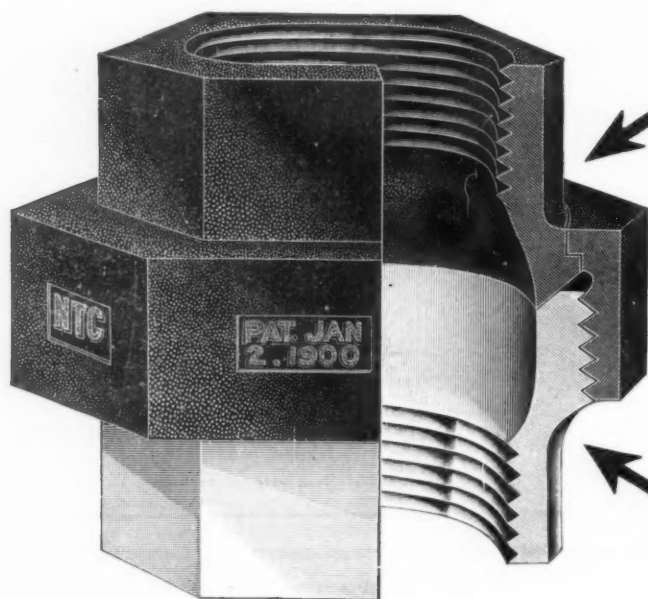
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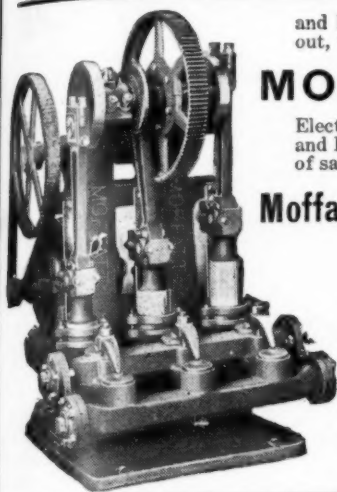
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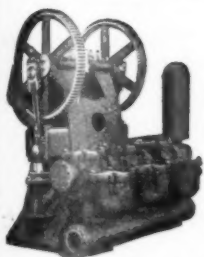
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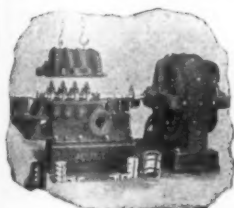
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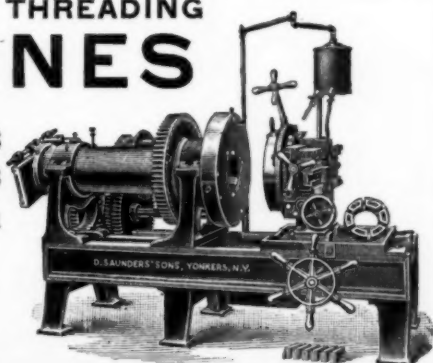
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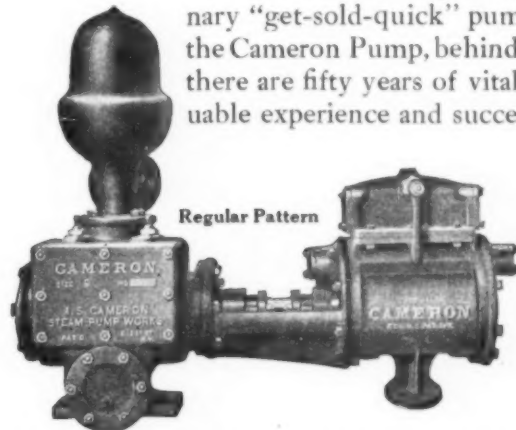
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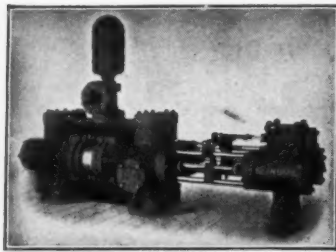
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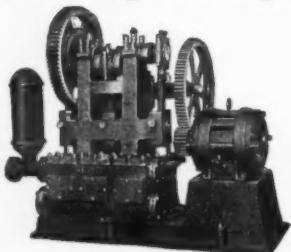
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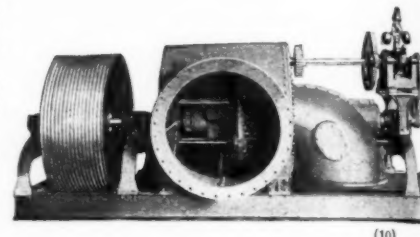
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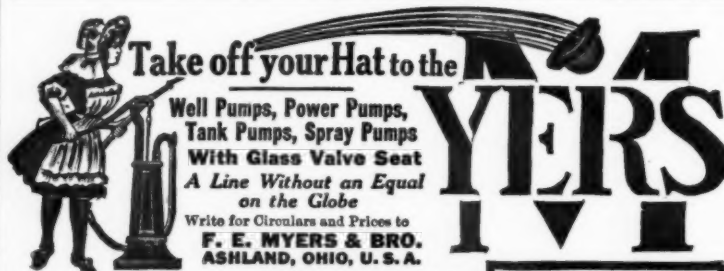
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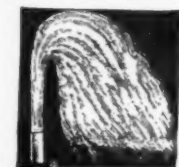
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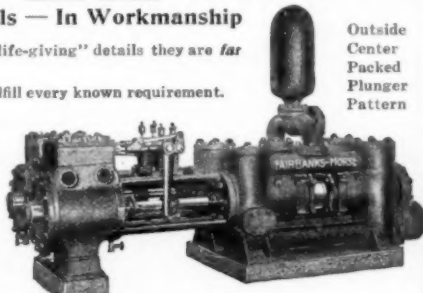
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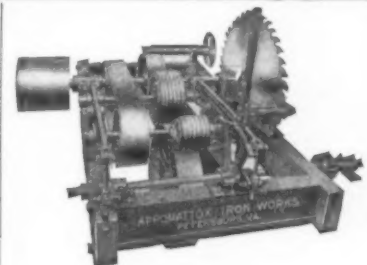
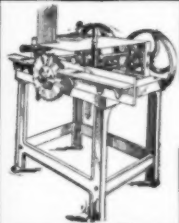
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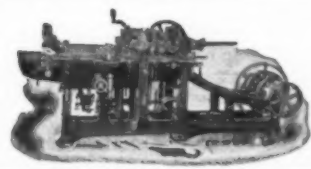
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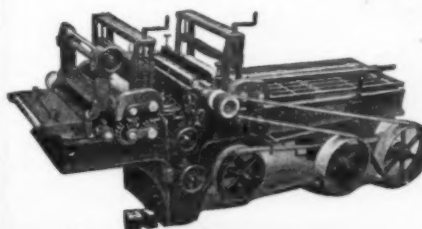
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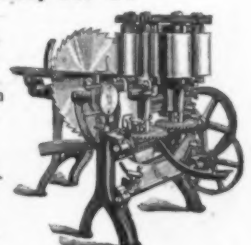
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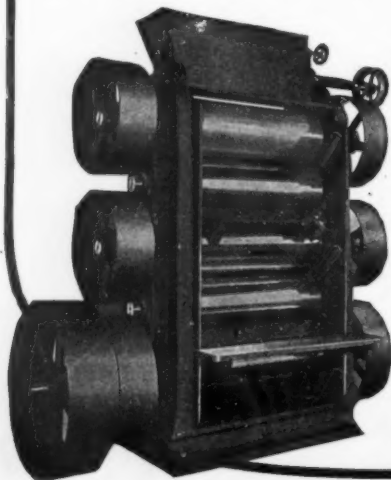
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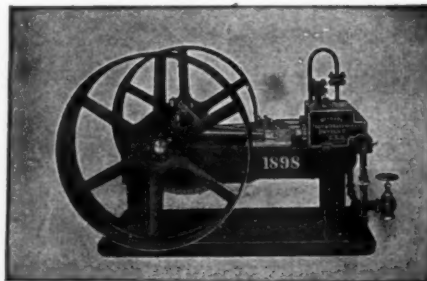
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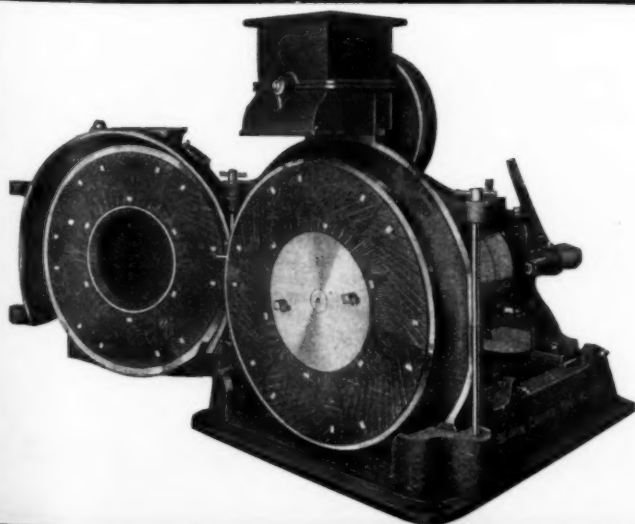
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It is a well known fact that climatic conditions of Southwest Texas are very conducive to the successful cultivation of a great variety of fruits. It is a fact, equally well known, that the process of decay sets in on the ripened fruit a good deal quicker here than in the colder climate of the North. As a result, bushels upon bushels and tons upon tons of fruit are annually lost to mankind, all or nearly all of which might be saved by canning.

Two hundred thousand people are annually pouring into the State of Texas. The greater number of these are locating in the Gulf Coast district in the vicinity of Texas City. The development of this section has, as a result, been so marked and rapid as to render the few factories located here utterly inadequate to meet the growing demands. That is why we say

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are a necessity of the Southwest and that Texas City is the most favorable spot in the Texas Gulf Coast district.

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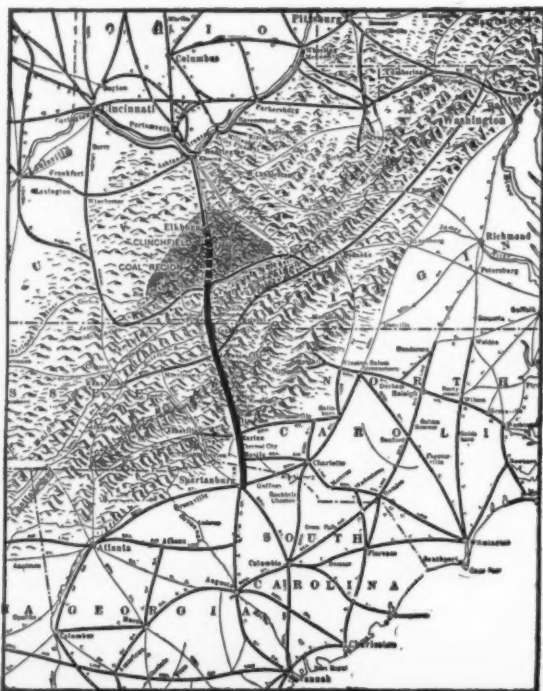
Embracing portions of Southwest Virginia, eastern Tennessee and western North Carolina, the Clinchfield territory is generously supplied with those mineral, timber, agricultural, fruit growing and industrial resources for which the Appalachian South is so well noted.

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Where can be found a similar section, surrounded on all sides by the industrial and commercial activities of a busy nation?

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Through its Industrial Department the B. & O. would like to discuss with you in further detail the advantages offered by West Virginia's cheap fuel supply.

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Thousands of farmers who have been brought here from the North and West have been able to purchase these most fertile lands at comparatively small cost per acre, and have found they produce marvelously.

Representing as they do the cream of the soil of the twenty-six States drained by the Mississippi River and its tributaries, they are of remarkable fertility and are capable of growing abundant crops of all grains, grasses and vegetables. Great success has also been made in stock raising and dairy farming.

In Louisiana and Mississippi alone there are approximately 16,000,000 acres of such lands. The greater part of these lie contiguous to the lines of the Illinois Central and the Yazoo & Mississippi Valley Railroads.

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This complete information covering the value of Louisiana and Mississippi wet lands for investment and homes will be sent to all interested.

Illinois Central Railroad
Chicago, Ill.

*J. C. Clair,
Industrial
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Between 1900 and 1910 the population of the United States increased.... 21%.

During the same period the population of Florida increased.....42.4%.

Thus Florida's population increased twice as rapidly as that of the entire country.

Its rate of increase was greater than that of any other State east of the Mississippi River.

The material advance of the State as illustrated in the increase in agricultural wealth was in keeping with this growth in population.

In the ten years, 1900 to 1910, the increase in value of farm lands in the United States was..... 118%.

During the same period the gain in Florida was..... 203%.

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"The Call of Florida" has been heard throughout the land. The gain in its population during the last ten years has been merely the advance guard of the pioneers.

For every hundred persons who were even thinking of Florida ten years ago, a thousand persons are now studying the State with a view to making it their home.

In the past people thought of Florida mainly for its ideal climate, its outdoor life amid flowers and palms in the months when biting, blasting blizzards made life almost unendurable in other sections.

Or they thought of it as a place which could produce oranges and grape fruit.

Now they think of Florida not only for these reasons, but also because they realize that it possesses a variety of resources which make possible the widest and most profitable diversity of agriculture and manufactures.

Investors, manufacturers, farmers and home-seekers will be furnished full information regarding the wonderful opportunities Florida presents.

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Lockwood, Greene & Co., Boston, Mass.
McLaughlin & Johnson, Lynchburg, Va.
Milburn, Heister & Co., Washington, D. C.
Northrup, Willard C., Winston-Salem, N. C.
Petitt & Cave, Danville, Va.
Shind & Lafaye, Columbia, S. C.
Silline, J. E., Greenville, S. C.
- Architects' Supplies.**
Keuffel & Esser, Hoboken, N. J.
Starrett Co., L. S., Athol, Mass.
Weber & Co., F., Philadelphia, Pa.
- Architectural Iron and Sheet Metal Work.**
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Chesapeake Iron Works, Baltimore, Md.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Schreiber & Sons Co., The, Cincinnati, O.
Sheard Architectural Iron Works, Louisville, Ky.
- Art Glass.**
Blinswanger & Co., Memphis, Tenn.
- Art Glass and Prisms. (Set in Zinc and Copper.)**
Spess Art Glass Co., G. A., St. Louis, Mo.
- Asbestos.**
Carolina Portland Cement Co., Charleston, S. C.
Jobus-Manville Co., H. W., New York, N. Y.
Southern Pipe Covering Co., Inc., Richmond, Va.
- Asphalt.**
Arncliffe Mfg. Co., Richmond, Va.
Barber Asphalt Paving Co., Philadelphia, Pa.
Gulf Refining Co., Pittsburg, Pa.
Texas Co., The, New York, N. Y.
- Asphalt Roofing and Siding. (Bird Sand and Chipped Slate Surface.)**
Berningham & Seaman Co., Chicago, Ill.
- Automatic Buckets.**
Browning Engineering Co., Cleveland, O.
- Automobiles. (Passenger.)**
Interstate Automobile Co., Muncie, Ind.
- Automobiles. (Motor Trucks.)**
Kelly Motor Truck Co., Springfield, O.
Schmidt Motor Car Co., Cincinnati, O.
- Axles. [See Car Wheels, Axles and Trucks.]**
- Babbitt Metal. [See Anti-Friction Metal.]**
- Badges. (Hat and Breast, Electric and Steam Round, Police and Fire Dept.)**
American Railway Supply Co., New York, N. Y.
- Bakers' Machinery.**
Lynn Superior Co., The, Cincinnati, O.
- Bankers and Brokers.**
Baltimore Trust Co., Baltimore, Md.
Delaware Trust Co., Wilmington, Del.
Florida Trust Co., Jacksonville, Fla.
Glenn, W. S., Spartanburg, S. C.
Guaranty State Bank & Trust Co., Dallas, Tex.
Halsey & Co., F. J., New York, N. Y.
Lisman & Co., F. J., New York, N. Y.
Mercantile Trust & Deposit Co., Baltimore, Md.
New First National Bank, Columbus, O.
Nauven & Co., John, Chicago, Ill.
Peabody, Houghton & Co., Chicago, Ill.
Savannah Bank & Trust Co., Savannah, Ga.
Short & Son, John C., New York, N. Y.
Southern States Development Co., New York, N. Y.
Violet & Co., Atwood, New York, N. Y.
- Banks.**
First National Bank, Baltimore, Md.
First Nat'l Bank Key West, Key West, Fla.
First National Bank, Richmond, Va.
Guaranty State Bank & Trust Co., Dallas, Tex.
Merchants National Bank, Baltimore, Md.
New First National Bank, Columbus, O.
National Exchange Bank, Baltimore, Md.
Savannah Bank & Trust Co., Savannah, Ga.
- Bank and Office Railings and Grilles. (Iron.)**
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Buckeye Wire & Iron Works Co., Columbus, O.
Chattanooga Iron & Wire Wks., Chattanooga, Tenn.
Chesapeake Iron Works, Baltimore, Md.
Cincinnati Mfg. Co., Cincinnati, O.
Dow Wire Works, Louisville, Ky.
Dufur & Co., Baltimore, Md.
Dufur, Baggett & Co., Baltimore, Md.
Jones & Co., L. E., Baltimore, Md.
Meyers Mfg. Co., F. J., Hamilton, O.
Ohio Elevator & Machine Co., The, Columbus, O.
- Bank Fixtures.**
Quincy Show Case Works, Quincy, Ill.
Ruse & Thompson, Baltimore, Md.
- Bar Iron. (Refined and Galvanized.)**
Carnegie Steel Co., Pittsburg, Pa.
Nietown Plate Washer Co., Philadelphia, Pa.
- Bars, Wire, Wire Fabric. (Steel for Concrete-Steel Construction.)**
American Steel & Wire Co., Chicago, Ill.
American System of Reinforcing, Chicago, Ill.
- Cincinnati Iron & Steel Co., Cincinnati, O.**
Concrete Steel Co., The, New York, N. Y.
Concrete Steel Engineering Co., New York, N. Y.
Franklin Steel Co., Franklin, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburg, Pa.
Southern Steel Products Co., Inc., Richmond, Va.
Wight & Co., W. N., New York, N. Y.
- Bearings. (Ball.)**
Bretz Co., J. S., New York, N. Y.
Hyatt Roller Bearing Co., Newark, N. J.
Standard Roller Bearing Co., Philadelphia, Pa.
- Bearings. (Brass Journal.)**
Gilbert & Sons Brass Fdry. Co., A., St. Louis, Mo.
- Bearings. (Locomotive and Car.)**
Keystone Bronze Co., Pittsburgh, Pa.
- Bearings. (Oilless.)**
North Amer. Metaline Co., Long Island City, N. Y.
- Bearings. (Roller.)**
Hyatt Roller Bearing Co., Newark, N. J.
Standard Roller Bearing Co., Philadelphia, Pa.
- Bells. (Call.)**
Holtzer-Cabot Electric Co., Boston, Mass.
- Bells and Gongs.**
National Tube Co., Pittsburgh, Pa.
Western Electric Co., New York, N. Y.
- Belting. (Leather, Canvas, Rubber.)**
American Supply Co., Providence, R. I.
Bailey-Lelby Co., Charleston, S. C.
Baltimore Belting Co., Baltimore, Md.
Cameron & Barkley Co., Charleston, S. C.
Chesapeake Belting Co., Baltimore, Md.
Diamond Rubber Co., Akron, O.
Dick, L. D., R. & J., Passaic, N. J.
Druid Rubber Belting Co., The, Baltimore, Md.
Gandy Belting Co., Baltimore, Md.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Rosendale-Rodaway B. & H. Co., Newark, N. J.
Ward-Beeke Co., Washington, D. C.
Williams & Sons, L. B., Dover, N. H.
- Belting. (Chain.)**
Bartlett & Snow Co., C. O., Cleveland, O.
Caldwell & Sons Co., H. W., Chicago, Ill.
Jeffrey Mfg. Co., Columbus, O.
Luk-Belt Co., Nictown (Philadelphia), Pa.
Morse Chain Co., Ithaca, N. Y.
- Belt Conveyors.**
Jeffrey Mfg. Co., Columbus, O.
Robins Conveying Belt Co., New York, N. Y.
- Belt Dressing.**
Diamond Rubber Co., Akron, O.
Gandy Belting Co., Baltimore, Md.
- Belt Fasteners.**
Crescent Belt Fastener Co., New York, N. Y.
- Belt Lacing. [See Belting, Leather, Canvas, Rubber, and Supplies.]**
- Bicarbonate Soda. (Sap Stain Launder Dip.)**
Church & Dwight Co., New York, N. Y.
- Blackboards. (Slate.)**
East Bangor Slate Co., The, East Bangor, Pa.
Hower, J. K., Stratford, Conn.
Johnson, E. J., New York, N. Y.
- Block Tackle. (For Wire or Manila Rope.)**
Patterson Co., W. W., Pittsburg, Pa.
- Blowers and Exhaust Fans.**
American Blower Co., Detroit, Mich.
Buffalo Forge Co., Buffalo, N. Y.
Clark Co., Geo. F., Windsor Locks, Conn.
De Laval Steam Turbine Co., Trenton, N. J.
Garden City Fan Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Green Fuel Economizer Co., Matamoras, N. Y.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Savannah Blow Pipe Co., Savannah, Ga.
Skinner Bros., St. Louis, Mo.
Standard Power & Metal Mfg. Co., Atlanta, Ga.
Sturtevant Co., B. F., Hyde Park, Mass.
- Blueprint Apparatus.**
Keuffel & Esser, Hoboken, N. J.
- Boilers.**
Andrews & Root Mfg. Co., Newburgh, N. Y.
Boiler Works, Oswego, N. Y.
Babcock & Wilcox Co., New York, N. Y.
Brownell Co., Dayton, O.
Cameron & Barkley Co., Charleston, S. C.
Casey-Hedges Co., Chattanooga, Tenn.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago House Wrecking Co., Chicago, Ill.
Cole Mfg. Co., R. D., Newnan, Ga.
Cooper Co., C. & G., Mt. Vernon, O.
Gem City Boiler Co., Dayton, O.
Gibbs Machinery Co., Columbia, S. C.
Hartley Boiler Works, Montgomery, Ala.
Heine Safety Boiler Co., St. Louis, Mo.
Keeler Co., E., Williamsport, Pa.
Lookout Boiler & Mfg. Co., Chattanooga, Tenn.
Lombard Iron Works, Augusta, Ga.
Mecklenburg Iron Works, Charlotte, N. C.
Murray Iron Works Co., Burlington, Ia.
Petroleum Iron Works Co., Sharon, Pa.
Phoenix Iron Works Co., Meadville, Pa.
Price Machinery Co., S. M., Norfolk, Va.
Schmidt & Sons Co., J. S., Macon, Ga.
Smith-Courtesy Co., Richmond, Va.
Southern Engine & Boiler Works, Jackson, Tenn.
Union Iron Works Co., Selma, Ala.
Valk & Murdock Iron Works, Charleston, S. C.
Vogt Machine Co., Henry, Louisville, Ky.
Walsh & Weldner Boiler Co., Chattanooga, Tenn.
- Boiler Setting.**
Harbison-Walker Refractories Co., Pittsburg, Pa.
- Boiler Tubes. [See Tubes, Boiler.]**
- Bolts, Nuts, Rivets, Studs and Washers.**
Lebanon Valley Iron & Steel Co., Lebanon, Pa.
Milton Mfg. Co., Milton, Pa.
Nietown Plate Washer Co., Philadelphia, Pa.
Republic Iron & Steel Co., Youngstown, O.
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- Bonds. (Surety, etc.)**
Fidelity & Deposit Co., Baltimore, Md.
- Boring. (Cylinder.)**
Strickland Machine Co., Richmond, Va.
- Bottling Outfits.**
Vilter Mfg. Co., Milwaukee, Wis.
- Box Shooks.**
Naylor & Co., S. E., Gulfport, Miss.
- Brass Goods.**
Bailey-Lelby Co., Charleston, S. C.
Buckeye Iron & Brass Works, Dayton, O.
Fowell Co., Wm., Cincinnati, O.
- Brazings. (Cast Iron.)**
Richmond Machine Works, Inc., Richmond, Va.
Strickland Machine Co., Richmond, Va.
- Brass Railings and Grilles, etc.**
McKenna Bros. Brass Co., Pittsburgh, Pa.
- Brewers' Machinery.**
Vilter Mfg. Co., Milwaukee, Wis.
- Brick. (Building.)**
Am. Enamelled Brick & Tile Co., New York, N. Y.
Brooklyn Pressed Brick & Mfg. Co., Brooklyn, N. Y.
- Carolina Portland Cement Co., Charleston, S. C.**
Fiske & Co., Inc., New York, N. Y.
Hood, B. Millin, Atlanta, Ga.
Hydraulic Press Brick Co., St. Louis, Mo.
Owens Brick & Tile Co., Millersville, Pa.
Pittsburgh-Butt Co., Pittsburgh, Pa.
Sibley-Menge Brick & Coal Co., Birmingham, Ala.
- Brick. (Blast Furnace, Coke Oven.)**
Ashland Fire Brick Co., Ashland, Ky.
Hood, B. Millin, Atlanta, Ga.
- Brick. (Enamelled.)**
Amer. Enam. Brick & Tile Co., New York, N. Y.
- Brick. (Fire Clay.)**
Ashland Fire Brick Co., Ashland, Ky.
Brooklyn Pressed Brick & Mfg. Co., Brooklyn, N. Y.
- Brick. (Fire Clay.)**
Fiske & Co., Inc., New York, N. Y.
Harbison-Walker Refractories Co., Pittsburg, Pa.
Kilian Fire Brick Works, Kilian, S. C.
Louisville Fire Brick Works, Highland Park, Ky.
Pottsville Terra-Cotta Co., Pottsville, N. C.
Stevens' Sons Co., H., Macon, Ga.
Taylor Sons Co., Chas., Cincinnati, O.
Union Mining Co., Mt. Savage, Md.
- Brick. (Magnesia.)**
Harbison-Walker Refractories Co., Pittsburg, Pa.
- Brick. (Paving.)**
Carlyle Paving Brick Co., Portsmouth, O.
Copeland-Ingalls Slate Brick Co., Birmingham, Ala.
- Brick. (Silica.)**
Harbison-Walker Refractories Co., Pittsburg, Pa.
- Brick and Clayworking Machinery and Supplies.**
American Clay Mchry. Co., The, Bucyrus, O.
Carnell, George, Philadelphia, Pa.
Fernaldt Brick Machinery Co., St. Louis, Mo.
Freese & Co., E. M., Gallon, O.
Gibbs Machinery Co., Columbia, S. C.
Scott-Madden Iron Works, Keokuk, Iowa.
Steele & Sons, J. C., Statesville, N. C.
Tappin-Rice-Clerkin Co., Akron, O.
- Brick Fireplaces. [See Fireplaces, Artistic Brick.]**
- Brick Machinery. (Sand Lime.) [See Sand-Lime Brick Machinery.]**
- Brickwork. (Artistic.)**
Fiske & Co., Inc., New York, N. Y.
- Bridges. (Concrete.)**
Concrete Steel Engineering Co., New York, N. Y.
Roanoke Bridge Co., Roanoke, Va.
- Bridges. (Rolling Lift.)**
Scherzer Rolling Lift Bridge Co., Chicago, Ill.
- Bridges.**
American Bridge Co. of New York, New York, N. Y.
Baltimore Bridge Co., Baltimore, Md.
Belmont Iron Works, Inc., Philadelphia, Pa.
Chicago Bridge & Iron Wks., Chicago, Ill.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Farris Bridge Co., Pittsburg, Pa.
Missouri Val. B'dge & Iron Co., Leavenworth, Kan.
Owego Bridge Co., Owego, N. Y.
Ritter-Conley Mfg. Co., Pittsburg, Pa.
Roanoke Bridge Co., Roanoke, Va.
Scherzer Rolling Lift Bridge Co., Chicago, Ill.
Vincennes Bridge Co., Vincennes, Ind.
Virginia Bridge & Iron Co., Roanoke, Va.
York Bridge Co., York, Pa.
- Bridge and Structural Iron Piers.**
Carolina Portland Cement Co., Charleston, S. C.
Chattanooga Cement Co., Chattanooga, Tenn.
Detroit Graphite Co., Detroit, Mich.
Dixon Crucible Co., Joseph, Jersey City, N. J.
Maryland Steel Co., Paint Dept., Sparrows Point, Md.
Standard Paint Co., New York, N. Y.
- Brimstone.**
Union Sulphur Co., New York, N. Y.
- Briquetting Machinery. (Coal, Lignite, Ore.)**
Devillers, Robert, Brooklyn, N. Y.
- Buckets. (Excavators.)**
Browning Mfg. Co., Mansfield, O.
Hayward Mfg. Co., New York, N. Y.
Moulton Mfg. Co., Chicago, Ill.
Owen Bucket Co., Cleveland, O.
Williams Co., The G. H., Cleveland, O.
- Buckets. (Ore, etc.)**
Brown Holding Mchry. Co., Cleveland, O.
Browning Mfg. Co., Mansfield, O.
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Hayward Mfg. Co., New York, N. Y.
Luk-Belt Co., Nictown (Philadelphia), Pa.
Owen Bucket Co., Cleveland, O.
Smith Co., T. L., Atlanta, Ga.
Williams Co., The G. H., Cleveland, O.
- Buhr Stones.**
Starr Co., B. F., Baltimore, Md.
- Builders and Contractors.**
Falls City Construction Co., Louisville, Ky.
Farris Bridge Co., Pittsburg, Pa.
Ferro Concrete Construction Co., Cincinnati, O.
Selden-Breck Construction Co., St. Louis, Mo.
White & Co., J. G., New York, N. Y.
- Buildings. (Financed and Erected.)**
Falls City Construction Co., Louisville, Ky.
Gulf Coast Construction Co., Houston, Tex.
- Building Supplies.**
Arncliffe Mfg. Co., Richmond, Va.
Birch, Chas. & R. O., Atlanta, Ga.
Carolina Portland Cement Co., Charleston, S. C.
Chicago House Wrecking Co., Chicago, Ill.
Southern Lumber & Cement Co., Charleston, S. C.
Southern Building Material Co., Norfolk, Va.
Southern Steel Products Co., Inc., Richmond, Va.
- Burlap-Inserted Roofing and Siding. (Flexible Cement.)**
Berningham & Seaman Co., Chicago, Ill.
- Burners. (Oil.) [See Fuel Oil Equipments.]**
- Bushings. (Oilless, for Loose Pulleys.)**
North Amer. Metaline Co., Long Island City, N. Y.
- Cables.**
American Steel & Wire Co., Chicago, Ill.
Broderick & Bascom Rope Co., St. Louis, Mo.
Roebeling's Sons Co., John A., Trenton, N. J.
Williamsport Wire Rope Co., Williamsport, Pa.
- Cableways. (Overhead Suspension.)**
Broderick & Bascom Rope Co., St. Louis, Mo.
Consolidated Tramway Co., Roanoke, Va.
Flory Mfg. Co., S., Bangor, Pa.
Lidgerwood Mfg. Co., New York, N. Y.
Mead-Morrison Mfg. Co., Cambridgeport, Mass.
Roebeling's Sons Co., John A., Trenton, N. J.
- Can and Box Making Machinery. (Tin.)**
Bliss Co., E. W., Brooklyn, N. Y.
- Cans.**
New Orleans Rfg. & Metal Wks., New Orleans, La.
Southern Can Co., Baltimore, Md.
United States Can Co., Cincinnati, O.
- Canning Machinery and Supplies.**
Canners & Packers' Supply Co., Baltimore, Md.
Robinson & Co., A. K., Baltimore, Md.
Sibley-Menge Brick & Coal Co., Birmingham, Ala.
Sprague Canning Machinery Co., Chicago, Ill.
- Carborundum Paper and Cloth.**
Carborundum Co., Niagara Falls, N. Y.
- Card Clothing.**
American Supply Co., Providence, R. I.
- Cars. (Dump, Industrial Logging and Mine.)**
Austin Mfg. Co., Chicago, Ill.
Baldwin Equipment & Supply Co., Chicago, Ill.
Chase Fdry. & Mfg. Co., Columbus, O.
Electric Wheel Co., Quincy, Ill.
Georgia Car & Locomotive Co., Atlanta, Ga.
Hunt Co., C. W., West New Brighton, N. Y.
Males Co., The, Cincinnati, O.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Raleigh Iron Works Co., Raleigh, N. C.
Smith Co., T. L., Atlanta, Ga.
Union Iron Works, Selma, Ala.
- Cars. (Passenger and Freight.) [See Railroad Equipment and Supplies.]**
- Car Couplers and Knuckles.**
Safety Car H't'g & L'g't'g Co., New York, N. Y.
- Car Lighting and Heating.**
Safety Car H't'g & L'g't'g Co., New York, N. Y.
- Car Wheels, Axles and Trucks.**
Carnegie Steel Co., Pittsburg, Pa.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Union Iron Works, Selma, Ala.
- Casters.**
Clark Co., Geo. P., Windsor Locks, Conn.
- Castings. (Aluminum.)**
Aluminum Company of America, Pittsburgh, Pa.
Sibert & Sons Brass Fdry. Co., A., St. Louis, Mo.
Norwalk Brass Co., Norwalk, Conn.
- Castings. (Brass and Bronze.)**
Gilbert & Sons Brass Fdry. Co., A., St. Louis, Mo.
Keystone Bronze Co., Pittsburgh, Pa.
Norwalk Brass Co., Norwalk, Conn.
Phosphor-Bronze Smelting Co., Phila., Pa.
Richmond Machine Works, Inc., Richmond, Va.
Stratton & Bragg Co., Petersburg, Va.
- Castings. (Iron, Gray, etc.)**
Columbian Iron Works, Chattanooga, Tenn.
Gibbs Machinery Co., Columbia, S. C.
Georgia Car & Locomotive Co., Atlanta, Ga.
Glanorgan Pipe & Foundry Co., Lynchburg, Va.
McWane Pipe Works, Lynchburg, Va.
Poele Engineering & Machine Co., Baltimore, Md.
Roanoke Iron Works, Inc., Roanoke, Va.
Robins Conveying Belt Co., New York, N. Y.
Ross-Meakin Foundry Co., Chattanooga, Tenn.
Stratton & Bragg Co., Petersburg, Va.
U. S. Cast Iron Pipe & Fdy. Co., New York, N. Y.
Valk & Murdock Iron Works, Charleston, S. C.
Westbrook Elevator Co., Danville, Va.
- Castings. (Malleable Iron and Steel.)**
Missouri Malleable Iron Co., East St. Louis, Ill.
- Castings. (Steel.)**
Crucible Steel Castings Co., Lansdowne, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Reliance Steel Casting Co., Pittsburg, Pa.
Riverside Steel Casting Co., Newark, N. J.
- Ceilings. (Metal.)**
Chattanooga Rfg. & Fdry. Co., Chattanooga, Tenn.
Edwards Manufacturing Co., Cincinnati, O.
Keighley Metal Cell. & Mfg. Co., S. Pittsburgh, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Cement.**
Alpha Portland Cement Co., Easton, Pa.
American Cement Co., Philadelphia, Pa.
Carolina Portland Cement Co., Charleston, S. C.
Cincinnati Portland Cement Corp., Kingsport, Tenn.
Dixie Portland Cement Co., Chattanooga, Tenn.
Hartman Cement Co., Wm. G., Philadelphia, Pa.
Iron Portland Cement Co., Iron, O.
Kirkpatrick Sand & Co., Inc., Birmingham, Ala.
Lehigh Portland Cement Co., Allentown, Pa.
Security Cement & Lime Co., Baltimore, Md.
Southern States Portland Cement Co., Charleston, S. C.
Standard Portland Cement Co., Leeds, Ala.
Tidewater Portland Cement Co., Baltimore, Md.
- Cement. (Liquids.)**
Glidden Varnish Co., Cleveland, O.
- Cement Machinery.**
Aising Engineering Co., J. R., New York, N. Y.
Power & Mining Machinery Co., Cudahy, Wis.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
- Chain Blocks.**
Ford Chain Block & Mfg. Co., Philadelphia, Pa.
- Chains. (Dredge, Quarry, Steam Shovel.)**
Weimer Chain & Iron Co., Lebanon, Pa.
- Channellers.**
Ingersoll-Rand Co., New York, N. Y.
- Checks, Metal. (Factory, Time and Merchandise.)**
American Railway Supply Co., New York, N. Y.
- Chemical and Drug Machinery.**
Campbell, F. F., Philadelphia, Pa.
- Chemists.**
Burn, Harry, Birmingham, Ala.
Davis, Geo. C., Philadelphia, Pa.
Froehling & Robertson, Richmond, Va.
McKenna, Dr. Chas. F., New York, N. Y.
- Chimneys. (Steel-Concrete.)**
Specialty Eng. Co., Houston, Tex.
Weber Chimney Co., Chicago, Ill.
- Chloride Accumulator.**
Electric Storage Battery Co., The, Phila., Pa.
- Chucks.**
Morse Twist Drill & Mch. Co., New Bedford, Mass.
- Cities and Towns/Commercial and Industrial Opportunities. [See Industrial, Agriculture and Commercial Opportunities.]**
- Clayworking Machinery. [See Brick and Clayworking Machinery.]**
- Cleansing Compound. (Floors, etc.)**
India Alkali Works, Boston, Mass.
- Clocks. (Electro-Self-Winding.)**
Electro-Clock Co., Baltimore, Md.
- Clocks. (Watchman.)**
Holtzer-Cabot Electric Co., Boston, Mass.
- Clutches.**
Dodge Manufacturing Co., Mishawaka, Ind.
Positive Clutch & Pulley Works, Buffalo, N. Y.
- Coal.**
Alabama Coal & Iron Co., Birmingham, Ala.
Cincinnati Coal Corp., Spartanburg, S. C.
Consolidated Fuel Co., Inc., New York, N. Y.
Flat Top Fuel Co., Bluefield, W. Va.
Hammond-Bryd Co., Birmingham, Ala.
Pittsburgh-Buffalo Co., Pittsburgh, Pa.
Tennessee Coal, Iron & R. R. Co., P'gh'm, Ala.
Yolande Coal & Coke Co., Birmingham, Ala.
- Coal Briquetting Machinery.**
Devillers, Robert, Brooklyn, N. Y.

Coal Cutters.

Ingersoll-Rand Co., New York, N. Y.
 Jeffrey Mfg. Co., Columbus, O.
 McKiernan-Terry Drill Co., New York, N. Y.

Coal Handling Machinery.

Barlett & Snow Co., C. O., Cleveland, O.
 Brown Hoisting Mfg. Co., Cleveland, O.
 Hayward Co., New York, N. Y.
 Hunt Co., C. W., West New Brighton, N. Y.
 Hunt Co., C. W., Columbus, O.
 Jeffrey Mfg. Co., Nictown (Philadelphia), Pa.
 Link-Belt Co., Cambridgeport, Mass.
 Mead-Morrison Mfg. Co., Cambridgeport, Mass.
 Robbins Conveying Belt Co., New York, N. Y.
 Williams Co., The G. H., Cleveland, O.

Coal Tar and By-Products.

Barrett Mfg. Co., Philadelphia, Pa.
 Carolina Portland Cement Co., Charleston, S. C.

Coke.

Alabama Coal & Iron Co., Birmingham, Ala.
 Pat Top Fuel Co., Bluefield, W. Va.
 Pittsburgh-Buffalo Co., Pittsburgh, Pa.
 Rogers, Brown & Co., Cincinnati, O.
 Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
 Yonkers Coal & Coke Co., Birmingham, Ala.

Collapsible Steel Forms. (For Concrete Work.)

Concrete Form & Engine Co., Detroit, Mich.

Concrete Construction. (Steel Reinforcement.)

American Steel & Wire Co., Chicago, Ill.
 American System of Reinforcing, Chicago, Ill.
 Brown Hoisting Machinery Co., Cleveland, O.
 Concrete-Steel Co., The, New York, N. Y.
 Concrete Steel Engineering Co., New York, N. Y.
 Concrete Construction Co., Cincinnati, O.
 Foster-Creighton-Gould Co., Nashville, Tenn.
 Jeffrey Mfg. Co., Columbus, O.
 Robert Mfg. Co., Milwaukee, Wis.
 Sheehan, Thomas, Danville, Va.
 Specialty Eng. Co., Houston, Tex.
 Wright & Co., W. N., New York, N. Y.

Concrete Curb Protection. (Steel.)

Steel Protected Concrete Co., Philadelphia, Pa.

Concrete Dams.

Amherst Hydraulic Const. Co., Boston, Mass.

Concrete Floor Dressing. (Waterproof.)

Gillette Varnish Co., Cleveland, O.

Concrete Forms. (Metal.)

Robert Mfg. Co., Milwaukee, Wis.

Concrete Forms. (Steel Collapsible.)

Concrete Form & Engine Co., Detroit, Mich.

Concrete Mixers.

Carolina Portland Cement Co., Charleston, S. C.
 Eureka Machine Co., Lansing, Mich.
 Jeffrey Mfg. Co., Columbus, O.
 Milwaukee Concrete Mixer & Mch. Co., Milwaukee, Wis.
 Smith Co., T. L., Atlanta, Ga.
 Standard Scale & Supply Co., Pittsburg, Pa.
 Waterloo Cement Mch. Co., Waterloo, Iowa.

Concrete Reinforcing Bars.

Concrete Steel Co., Pittsburg, Pa.
 Concrete-Steel Co., The, New York, N. Y.
 Concrete Steel Engineering Co., New York, N. Y.
 Franklin Steel Co., Franklin, Pa.

Condensers.

Albinger Condenser Co., New York, N. Y.
 Dean Bros. Steam Pump Wks., Indianapolis, Ind.
 Westinghouse Machine Co., Pittsburg, Pa.
 Wheeler Condenser & Eng. Co., New York, N. Y.
 York Mfg. Co., York, Pa.

Conductor Pipe.

Edwards Mfg. Co., Cincinnati, O.
 Emery & Co., C. G., Pittsburg, Pa.
 Milwaukee Corrugating Co., Milwaukee, Wis.

Contractors' Machinery and Supplies. [See also Hoisting Machinery.]

American Hoist & Derrick Co., St. Paul, Minn.
 American Locomotive Co., New York, N. Y.
 Austin Mfg. Co., Chicago, Ill.
 Case Threshing Mch. Co., J. I., Racine, Wis.
 Clyde Iron Works, Duluth, Minn.
 Contractors' Plant Mfg. Co., Ltd., Buffalo, N. Y.
 Eater Machine Works, Pittston, Pa.
 Flory Mfg. Co., S. Bangor, Pa.
 Hyde Bros. & Co., New York, N. Y.
 Ingersoll-Rand Co., New York, N. Y.
 Linton, W. J., New York, N. Y.
 Males Co., The, Cincinnati, O.
 Marine Metal & Supply Co., New York, N. Y.
 Maryland Equipment & Supply Co., Baltimore, Md.
 Mead-Morrison Mfg. Co., Cambridgeport, Mass.
 Monahan Mch. Co., Chicago, Ill.
 Other Mfg. Co., Wm. J., Knoxville, Tenn.
 Owen Buckle Co., Cleveland, O.
 Pickett, H. W., Philadelphia, Pa.
 Robbins Conveying Belt Co., New York, N. Y.
 Smith Co., T. L., Atlanta, Ga.
 Warner Equipment Co., Cincinnati, O.
 Williamson Bros. Co., Philadelphia, Pa.

Conveying Machinery.

Barlett & Snow Co., C. O., Cleveland, O.
 Brown Hoisting Mch. Co., Cleveland, O.
 Caldwell & Son, Chicago, Ill.
 Consolidated Tramway Co., Roanoke, Va.
 Dodge Manufacturing Co., Mishawaka, Ind.
 Flory Mfg. Co., S. Bangor, Pa.
 Hayward Co., New York, N. Y.
 Hunt Co., C. W., West New Brighton, N. Y.
 Jeffrey Mfg. Co., Columbus, O.
 Link-Belt Co., Nictown (Philadelphia), Pa.
 Mead-Morrison Mfg. Co., Cambridgeport, Mass.
 McLanahan Stone Mach. Co., Hollidaysburg, Pa.
 Robbins Conveying Belt Co., New York, N. Y.
 Symons Bros., Milwaukee, Wis.

Cooling Towers.

Albinger Condenser Co., New York, N. Y.
 Wheeler Condenser & Eng. Co., New York, N. Y.

Cordage.

American Mfg. Co., New York, N. Y.
 Broderick & Ransom Rope Co., St. Louis, Mo.
 Columbian Rope Co., Auburn, N. Y.
 Plymouth Cordage Co., North Plymouth, Mass.
 Turner Co., J. Spencer, New York, N. Y.
 Whitlock Cordage Co., New York, N. Y.

Cordage Machinery.

Hasell-Daves Machine Co., Boston, Mass.

Corn-Mill Machinery.

Nordley & Munson Co., Indianapolis, Ind.
 Raymond Bros. Impact Pulv. Co., Chicago, Ill.
 Starr Co., B. F., Baltimore, Md.
 Wolf Co., Chambersburg, Pa.

Cotton Duck.

Turner Co., J. Spencer, New York, N. Y.

Cotton Oil and Products.

American Cotton Oil Co., New York, N. Y.

Cotton Yarns. (Commission Merchants)

Paulsen, Linkin & Co., New York, N. Y.

Cotton-Gin Machinery.

Carver Cotton Gin Co., East Bridgewater, Mass.
 Continental Gin Co., Birmingham, Ala.
 Gibbs Machinery Co., Columbia, S. C.
 Van Winkle Gin & Machine Co., Atlanta, Ga.

Cotton-Mill Machinery.

American Mach. & Mfg. Co., Charlotte, N. C.
 American Supply Co., Providence, R. I.
 Draper Co., Hopedale, Mass.
 Kison Machine Shop, Lowell, Mass.
 Lowell Machine Shop, Lowell, Mass.
 Mason Machine Works, Taunton, Mass.
 Saco-Pettie Co., Newton Upper Falls, Mass.
 Whitin Machine Works, Whitinsville, Mass.
 Whitinsville Spinning Ring Co., Whitinsville, Mass.

Cotton-Mill Supplies.

American Supply Co., Providence, R. I.
 Whitinsville Spinning Ring Co., Whitinsville, Mass.

Cottonseed-Oil Machinery.

Buckeye Iron & Brass Works, Dayton, O.
 Burruss Engineering Co., Atlanta, Ga.
 Callahan Co., W. P., The, Dayton, O.
 Cardwell Machine Co., Richmond, Va.
 Carver Cotton Gin Co., East Bridgewater, Mass.
 Continental Gin Co., Birmingham, Ala.
 Raymond Bros. Impact Pulv. Co., Chicago, Ill.
 Van Winkle Gin & Machine Co., Atlanta, Ga.

Couplings.

American Spiral Pipe Works, Chicago, Ill.
 Caldwell Co., Inc., W. E., Louisville, Ky.
 Dodge Manufacturing Co., Mishawaka, Ind.
 Golden Foundry & Machine Co., Columbus, Ga.
 Schuchert-Scott Co., Baltimore, Md.
 Wood's Sons, T. B., Chambersburg, Pa.

Couplings. (Car.)

Welter Chain & Iron Co., Lebanon, Pa.

Couplings. (Hose, Air, Gas, Steam and Water.)

National Tube Co., Pittsburg, Pa.

Covering. (Pipe, Boiler, etc.)

Carolina Portland Cement Co., Charleston, S. C.
 Southern-Manville Co., H. W., New York, N. Y.
 Southern Pipe Covering Co., Inc., Richmond, Va.

Cranes. (Locomotive.)

American Hoist & Derrick Co., St. Paul, Minn.
 Brown Hoisting Machinery Co., Cleveland, O.
 Browning Engineering Co., Cleveland, O.
 Exeter Machine Works, Pittston, Pa.

Cranes. (Traveling, Hand, Power, Hydraulic.)

Brown Hoisting Machinery Co., Cleveland, O.
 Hayward Co., New York, N. Y.
 Lane Mfg. Co., Montgomery, Md.
 Northern Engineering Works, Detroit, Mich.
 Speidel, J. G., Reading, Pa.

Crayons.

Lowell Crayon Co., Lowell, Mass.

Crematories. (Garbage.)

Specialty Eng. Co., Houston, Tex.

Cressets.

Carolina Portland Cement Co., Charleston, S. C.

Cressets Oil.

Atlantic Turpentine & Refining Co., Savannah, Ga.

Crossed Wood Block. (Contractors for Laying.)

Crossed Wood Block Pav. Co., New Orleans, La.

Crossing Works.

Gulfport Crossing Co., Gulfport, Miss.
 International Crossing & Cons. Co., Galveston, Tex.
 National Lumber & Cross. Co., Texarkana, Ark.
 Southern Crossing Co., Ltd., Slidell, La.
 Southern Wood Preserving Co., Atlanta, Ga.

Crossarms and Pins.

Carolina Electrical Co., Raleigh, N. C.
 International Crossing & Cons. Co., Galveston, Tex.
 Southern Crossing Co., Ltd., Slidell, La.
 Western Electric Co., New York, N. Y.

Crossings. [See Railroad Frogs and Switches.]**Crossing Machine.**

Standard Cross Tie Mch. Co., New Orleans, La.

Crossies.

International Crossing & Cons. Co., Galveston, Tex.
 National Lumber & Cross. Co., Texarkana, Ark.
 Naylor & Co., S. E., Gulfport, Miss.
 Southern Crossing Co., Ltd., Slidell, La.

Crossies. (Steel.)

Carnegie Steel Co., Pittsburg, Pa.

Crushers. (Corn and Cob.)

Gardner Crusher Co., New York, N. Y.
 Jeffrey Mfg. Co., Columbus, O.
 Raymond Bros. Impact Pulv. Co., Chicago, Ill.
 Williams Pat. Crusher & Pulv. Co., Chicago, Ill.

Crushers. (Rock.)

Austin Mfg. Co., Chicago, Ill.
 Case Threshing Mch. Co., J. I., Racine, Wis.
 Cresson Co., Geo. V., Philadelphia, Pa.
 Gardner Crusher Co., New York, N. Y.
 Lehigh Crusher Co., Ltd., Catasauqua, Pa.
 Power & Mining Machinery Co., Cudahy, Wis.
 Raymond Bros. Impact Pulv. Co., Chicago, Ill.
 Smith Co., T. L., Atlanta, Ga.
 Symons Bros., Milwaukee, Wis.
 Universal Road Mch. Co., Kingston, N. Y.
 Waterloo Cement Mch. Co., Waterloo, Iowa.

Crushing and Pulverizing Machinery.

Alding Engineering Co., J. R., New York, N. Y.
 Austin Mfg. Co., Chicago, Ill.
 Barlett & Snow Co., C. O., Cleveland, O.
 Cresson Co., Geo. V., Philadelphia, Pa.
 Gardner Crusher Co., New York, N. Y.
 Lehigh Crusher Co., Ltd., Catasauqua, Pa.
 McLanahan Stone Mach. Co., Hollidaysburg, Pa.
 Power & Mining Machinery Co., Cudahy, Wis.
 Pratt Engineering & Mch. Co., Atlanta, Ga.
 Raymond Bros. Impact Pulv. Co., Chicago, Ill.
 Symons Bros., Milwaukee, Wis.
 Walker & Elliott, Wilmington, Del.
 Williams Pat. Crusher & Pulv. Co., Chicago, Ill.

Culverts. (Corrugated Metal.)

American Rolling Mill Co., Middletown, O.
 Canton Culvert Co., The, Canton, O.
 Dixie Culvert & Metal Co., Atlanta, Ga.
 Kentucky Culvert Mfg. Co., Buechel, Ky.
 New Orleans Rfg. & Metal Wks., New Orleans, La.
 North Carolina Metal Culv. Co., Greensboro, N. C.
 Roanoke Bridge Co., Roanoke, Va.
 Tennessee Metal Culvert Co., Nashville, Tenn.
 Virginia Metal Culvert Co., Roanoke, Va.

Culverts. (Vitrified Pipe.)

Stevens Sons Co., H., Macon, Ga.

Cupola Furnaces.

Northern Engineering Works, Detroit, Mich.
 Puxson Co., J. W., Philadelphia, Pa.
 Petroleum Iron Works Co., Sharon, Pa.

Cuts. (Half-Tone, Line, etc.)

Baltimore Maryland Engr. Co., Baltimore, Md.

Cutter Heads. (Woodworking.)

Shimer & Sons, Samuel J., Milton, Pa.

Cutter Grinders.

Abrasive Material Co., Philadelphia, Pa.
 Vitrified Wheel Co., Westfield, Mass.

Dams. (Reinforced Concrete.)

Amherst Hydraulic Const. Co., Boston, Mass.

Derricks and Derrick Fittings.

American Hoist & Derrick Co., St. Paul, Minn.
 Monaghan Machine Co., Chicago, Ill.
 National Hoisting Engine Co., Harrison, W. J.
 Waterloo Cement Mch. Co., Waterloo, Iowa.

Designers and Illustrators. (Printed Matter.)

Baltimore Maryland Engr. Co., Baltimore, Md.

Die Makers. (Special.)

Black & Decker Mfg. Co., Baltimore, Md.

Ditching Machinery.

American Hoist & Derrick Co., St. Paul, Minn.
 American Locomotive Co., New York, N. Y.
 American Steel Dredge Co., Ft. Wayne, Ind.
 Browning Mfg. Co., Mansfield, O.
 Fairbanks Steam Shovel Co., Marion, O.
 Hayward Co., The, New York, N. Y.
 Marion Steam Shovel Co., Marion, O.
 Monaghan Machine Co., Chicago, Ill.
 Owen Bucket Co., Cleveland, O.
 Williams Co., The G. H., Cleveland, O.

Doors. (Birch Veneered.)

Carolina Portland Cement Co., Charleston, S. C.
 Massey & Felton Lumber Co., Macon, Ga.

Doors. (Steel Rolling.)

Kinnear Mfg. Co., Columbus, O.

Doors. (Tin Clad.)

Victor Mfg. Co., Newburyport, Mass.

Doors, Partitions. (Metallic.)

Dahlstrom Metallic Door Co., Jamestown, N. Y.
 United States Metal Products Co., New York, N. Y.

Doors, Sash and Blinds.

Columbia Iron Works Co., Columbus, Ga.
 Massey & Felton Lumber Co., Macon, Ga.

Draftsmen's Supplies.

Keuffel & Esser, Hoboken, N. J.
 Weber & Co., F., Philadelphia, Pa.

Dredge Chains.

Welter Chain & Iron Co., Lebanon, Pa.

Dredges. [See Excavating Machinery.]**Drills. (Pneumatic.) [See also Drills, Rock and Mining.]**

Drill Way Electric Works, Fort Wayne, Ind.
 Ingersoll-Rand Co., New York, N. Y.
 Keystone Steam Well Mach. Co., Beaver Falls, Pa.
 McKiernan-Terry Drill Co., New York, N. Y.
 Drills. (Rock and Mining.)
 Chicago Pneumatic Tool Co., Chicago, Ill.
 Drill Way Electric Works, Fort Wayne, Ind.
 Independent Pneumatic Tool Co., Chicago, Ill.
 Ingersoll-Rand Co., New York, N. Y.
 Jeffrey Mfg. Co., Columbus, O.
 McKiernan-Terry Drill Co., New York, N. Y.
 Wickes Bros., Jersey City, N. J.

Drills. (Twist.)

Manning, Maxwell & Moore, Inc., New York, N. Y.
 Morse Twist Drill & Mch. Co., New Bedford, Mass.

Drive Well Points and Well Supplies.

National Tube Co., Pittsburg, Pa.

Drop Forgings.

American Spiral Pipe Works, Chicago, Ill.
 Great Southern Automobile Co., Birmingham, Ala.
 Richmond Forgings Corporation, Richmond, Va.

Drop Forging Machinery.

Bliss Co., E. W., Brooklyn, N. Y.

Drying Machinery.

American Blower Co., Detroit, Mich.
 American Process Co., New York, N. Y.
 Bailey-Libby Co., The, Charleston, S. C.
 Buffalo Forge Co., Buffalo, N. Y.
 Ruggles-Cole Engineering Co., New York, N. Y.
 Sturtevant Co., B. F., Hyde Park, Mass.

Drydocks.

American Blower Co., Detroit, Mich.

Dumbwaiters.

Hollister Whitney Co., Quincy, Ill.

Dust-Collecting Systems.

Buffalo Forge Co., Buffalo, N. Y.
 Savannah Blow Pipe Co., Savannah, Ga.
 Skinner Bros., St. Louis, Mo.
 Smith Roofing Co., Wilmington, N. C.
 Standard Blower & Metal Mfg. Co., Atlanta, Ga.

Dynamite.

du Pont de Nemours Powder Co., E. I., Wilmington, Del.

Dynamometers and Motors. (Steam Turbine.)

De Laval Steam Turbine Co., Trenton, N. J.
 Emerson Steam Pump Co., Alexandria, Va.
 Fort Wayne Electric Works, Ft. Wayne, Ind.
 General Electric Co., Schenectady, N. Y.
 Southwark Fdry. & Mch. Co., Philadelphia, Pa.
 Terry Steam Turbine Co., New York, N. Y.
 Western Electric Co., New York, N. Y.
 Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

Eaves. (Trough.)

Edwards Mfg. Co., Cincinnati, O.
 Hussey & Co., C. G., Pittsburg, Pa.
 Milwaukee Corrugating Co., Milwaukee, Wis.

Ejectors. (Automatic Sewage.)

Blaisdell Machinery Co., Bradford, Pa.

Electric Machinery. (Dynamometers, Generators, Motors, etc.)

Allis-Chalmers Co., Milwaukee, Wis.
 American Engine Co., Bound Brook, N. J.
 American Machine Co., Louisville, Ky.
 Crocker-Wheeler Co., Amper, N. J.
 Doubleday-Hill Electric Co., Pittsburg, Pa.
 Engberg's Elect. & Mech. Works, St. Joseph, Mo.
 Fairbanks, Morse & Co., Chicago, Ill.
 Fort Wayne Electric Works, Ft. Wayne, Ind.
 General Electric Co., Schenectady, N. Y.
 Gregory Electric Co., Chicago, Ill.
 Kentucky Electrical Co., Owensboro, Ky.
 Lee Electric Co., Baltimore, Md.
 Miller-Owen Elec. Co., Pittsburg, Pa.
 Piedmont Electric Co., Asheville, N. C.
 Robinson Dynamo & Engine Co., Ridgway, Pa.
 Riker Machinery Co., New York, N. Y.
 Robbins & Myers Co., Springfield, O.
 Southwark Fdry. & Mch. Co., Philadelphia, Pa.
 Sturtevant Co., B. F., Hyde Park, Mass.
 Triumph Electric Co., Cincinnati, O.
 Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

Electrical Contractors, Instruments and Supplies.

American Mach. & Mfg. Co., Charlotte, N. C.
 Crocker-Wheeler Co., Amper, N. J.
 Doubleday-Hill Electric Co., Pittsburg, Pa.
 Engberg's Elect. & Mech. Works, St. Joseph, Mo.
 Fort Wayne Electric Works, Ft. Wayne, Ind.
 General Electric Co., Schenectady, N. Y.
 Gregory Electric Co., Chicago, Ill.
 Johns-Manville Co., H. W., New York, N. Y.
 Kentucky Electrical Co., Owensboro, Ky.
 Lee Electric Co., Baltimore, Md.
 Levy, Deronda, Columbus, Ga.
 Piedmont Electric Co., Asheville, N. C.
 Robbins & Myers Co., Springfield, O.
 Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

Electro Magnet. [See Magnet Electro.]**Elevating, Conveying and Power Transmission Machinery. [See also Conveying Mch. and Power Transmission Mch.]**

Jeffrey Mfg. Co., Columbus, O.

Elevators.

American Machine Co., Louisville, Ky.
 Curran Elevator Co., James H., Cincinnati, O.
 Hollister Whitney Co., Quincy, Ill.
 Kansas City Elevator Mfg. Co., Kansas City, Mo.
 Moffatt Machinery Mfg. Co., Charlotte, N. C.
 Ohio Elevator & Machine Co., Columbus, O.
 Otis Elevator Co., New York, N. Y.
 Sidney Elevator & Mfg. Co., Sidney, O.
 Siedel, J. G., Reading, Pa.
 Warsaw Elevator Co., Warsaw, N. Y.
 Westbrook Elevator Co., Danville, Va.

Elevator Safety Appliances.

Both Elevator Safety Co., Inc., Baltimore, Md.

Elevator Buckets.

Caldwell & Son Co., H. W., Chicago, Ill.
 Dodge Mfg. Co., Mishawaka, Ind.
 Jeffrey Mfg. Co., Columbus, O.
 Link-Belt Co., Philadelphia, Pa.

Elevator Enclosures and Cabs.

Bolles Iron & Wire Works, J. E., Detroit, Mich.
 Cincinnati Mfg. Co., Cincinnati, O.
 Dow Wire Works, Louisville, Ky.
 Dufur & Co., Baltimore, Md.
 Dufur, Baggott & Co., Baltimore, Md.
 Jones & Co., L. E., Baltimore, Md.
 Meyers Mfg. Co., The Fred J., Hamilton, O.
 Ohio Elevator & Machine Co., The, Columbus, O.
 Otis Elevator Co., New York, N. Y.
 Southern Wire & Iron Mfg. Co., Dallas, Tex.

Elevator Rope. [See Wire Rope.]**Elevator Safety Gates.**

Richmond Safety Gate Co., Richmond, Ind.

Emery Wheels. [See Grinding Wheels.]

- Engines.**
Blaisdell Machinery Co., Bradford, Pa.
Bogart Gas Power Eng. Co., Buffalo, N. Y.
De La Vergne Machine Co., New York, N. Y.
Fairbanks, Morse & Co., Chicago, Ill.
Mietz, A., New York, N. Y.
Otto Gas Engine Works, Philadelphia, Pa.
Standard Gas Power Co., Atlanta, Ga.
Westinghouse Machine Co., The, Pittsburg, Pa.
- OIL.**
Corvinton Mch. Co., New York, N. Y.
De La Vergne Machine Co., New York, N. Y.
Mietz, A., New York, N. Y.
- Engines. (Steam.)**
Allis-Chalmers Co., Milwaukee, Wis.
American Blower Co., Detroit, Mich.
American Engine Co., Round Brook, N. J.
American Holst & Derrick Co., St. Paul, Minn.
Ames Iron Works, Oswego, N. Y.
Atlas Engine Works, Indianapolis, Ind.
Ball Engine Co., Erie, Pa.
Brownell Co., The, Dayton, O.
Buffalo Forge Co., Buffalo, N. Y.
Cameron & Hartley Co., Charleston, S. C.
Chicago House Wrecking Co., Chicago, Ill.
Cooper Co., C. & G., Mt. Vernon, O.
Duke Engine Co., Grand Haven, Mich.
Engberg's Elect. & Mech. Works, St. Joseph, Mo.
Gibbs Machinery Co., Columbia, S. C.
Greenwald Co., I. & E., Cincinnati, O.
Griffith & Wedge Co., The, Zanesville, O.
Harrisburg Fdry. & Mach. Wks., Harrisburg, Pa.
Hooven, Owen, Rentschler Co., Hamilton, O.
Houston, Stanwood & Gamble Co., Cincinnati, O.
Leffel & Co., James, Springfield, O.
Lombard Iron Works, Augusta, Ga.
Mecklenburg Iron Works, Charlotte, N. C.
Morris Machine Works, Baldwinville, N. Y.
Murray Iron Works Co., Burlington, Ia.
Phoenix Iron Works Co., Meadville, Pa.
Price Machinery Co., S. M., Norfolk, Va.
Purser, J. H., Charlotte, N. C.
Ridgway Dynamo & Engine Co., Ridgway, Pa.
Schodde's Sons Co., J. S., Macon, Ga.
Smith-Courtney Co., Richmond, Va.
Southern Engine & Boiler Works, Jackson, Tenn.
Sturtevant Co., B. F., Hyde Park, Mass.
Union Iron Works Co., Selma, Ala.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Machine Co., Pittsburg, Pa.
- Engines. (Truck and Aeroplane.)**
Black & Decker Mfg. Co., Baltimore, Md.
- Envelopes.**
Yonng & Selden Co., Baltimore, Md.
- Excavating Machinery. (Steam Shovels, etc.)**
American Locomotive Co., New York, N. Y.
American Steel Dredge Co., Ft. Wayne, Ind.
Baldwin Equipment & Supply Co., Chicago, Ill.
Browning Mfg. Co., Cincinnati, O.
Bucyrus Co., The, So. Milwaukee, Wis.
Cable Excavator Co., Philadelphia, Pa.
Fairbanks Steam Shovel Co., Marion, O.
Hayward Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Lidgerwood Mfg. Co., New York, N. Y.
Males Co., Cincinnati, O.
Marion Steam Shovel Co., Marion, O.
Monaghan Machine Co., Chicago, Ill.
Owen Bucket Co., Cleveland, O.
Williams Co., The G. H., Cleveland, O.
- Excelsior Machinery.**
Kline, Lewis T., Alpena, Mich.
- Exhaust Heads.**
Abendroth & Root Mfg. Co., Newburgh, N. Y.
American Spiral Pipe Works, Chicago, Ill.
Greenwald Co., I. & E., Cincinnati, O.
Hoppes Mfg. Co., Springfield, O.
- Exhibits. (Machinery Builders' Equipment and Supplies.)**
Bourse, The, Philadelphia, Pa.
Builders' Exchange, Baltimore, Md.
- Expansion Joints.**
Alberger Condenser Co., New York, N. Y.
Badger & Sons Co., E. B., Boston, Mass.
- Explosives.**
du Pont de Nemours Powder Co., E. I., Wilmington, Del.
- Factory Sites. (Town and Railroad.)** [See Industrial, Agricultural and Commercial Opportunities.]
- Fans. (Electric.)**
Doubleday-Hill Electric Co., Pittsburg, Pa.
General Electric Co., Schenectady, N. Y.
Robbins & Myers Co., Springfield, O.
Western Electric Co., New York, N. Y.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.
- Fans. (Ventilating.)** [See Blowers, Exhaust Fans.]
- Fastener Driving Machine. (Corrugated Joint.)**
Saracac Machine Co., St. Joseph, Mich.
- Feed-Water Heaters and Purifiers.**
Alberger Condenser Co., New York, N. Y.
American Water Softener Co., Philadelphia, Pa.
Blake & Knowles Steam Pump Works, New York, N. Y.
Brownell Co., Dayton, O.
Exeter Machine Works, Pittsburg, Pa.
Gibbs Machinery Co., Columbia, S. C.
Greenwald Co., I. & E., Cincinnati, O.
Hoppes Mfg. Co., Springfield, O.
McAdoo, Thomas, Philadelphia, Pa.
Murray Iron Works Co., Burlington, Ia.
National Pipe Bending Co., New Haven, Conn.
Scalfe & Sons Co., Wm. B., Pittsburg, Pa.
Stewart Heater Co., Buffalo, N. Y.
Wilmington Iron Works, Wilmington, N. C.
- Feed-Water Heater and Purifier and Oil Separator Combined.**
Blake & Knowles Steam Pump Works, New York, N. Y.
Stewart Heater Co., Buffalo, N. Y.
- Felt. (Building, Sheathing.)**
Barrett Mfg. Co., Philadelphia, Pa.
- Fencing, Entrance Gates. (Iron, Steel, Wire.)**
American Steel & Wire Co., Chicago, Ill.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Dow Wire Works, Louisville, Ky.
Duffer & Co., Baltimore, Md.
New Jersey Wire Cloth Co., Trenton, N. J.
Ohio Elevator & Mach. Co., The, Columbus, O.
- Fertilizer Machy. [See also Phosphate Machy.]**
Campbell, P. F., Philadelphia, Pa.
Pratt Eng. & Mch. Co., Atlanta, Ga.
Smith Co., T. L., Atlanta, Ga.
Walk & Murdoch Iron Works, Charleston, S. C.
Walker & Elliott, Wilmington, Del.
Wilmington Iron Works, Wilmington, N. C.
- Files.**
Barnett Co., G. & H., Philadelphia, Pa.
Delta File Works, Philadelphia, Pa.
Nicholson File Co., Providence, R. I.
- Filters. (Water, for Domestic and Industrial Purposes.)**
American Water Softener Co., Philadelphia, Pa.
International Filter Co., Chicago, Ill.
Lynn-Superior Co., The, Cincinnati, O.
New York Con. Jewell Fil. Co., New York, N. Y.
Roberts Filter Mfg. Co., Philadelphia, Pa.
Scalfe & Sons Co., Wm. B., Pittsburg, Pa.
Tucker & Laxton, Charlotte, N. C.
- Financial Publication.**
Financial Review, New York, N. Y.
- Fire Alarm Boxes.**
Balto. Mch. Products Co. (Relay Station P. O.), Baltimore, Md.
- Fire Clay Brick. [See Brick, Fire Clay.]**
- Fire Box Blocks.**
Ashland Fire Brick Co., Ashland, Ky.
- Fire Door Fixtures.**
Peters & Son, Jas., Philadelphia, Pa.
Victor Mfg. Co., Newburyport, Mass.
- Fire Extinguishers.**
Badger & Sons Co., E. B., Boston, Mass.
General Fire Extinguisher Co., Providence, R. I.
- Fire Escapes.**
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Chesapeake Iron Works, Baltimore, Md.
- Fire Insurance.**
Hartford Fire Insurance Co., Hartford, Conn.
- Fireplaces. (Artistic Brick.)**
Fiske & Co., Inc., New York, N. Y.
- Fireproof Building Construction. (Steel.)** [See Concrete Construction.]
- Fireproof Building Material.**
Dahlstrom Metallic Door Co., Jamestown, N. Y.
Johns-Manville Co., H. W., New York, N. Y.
- Fireproof Doors and Shutters.**
Dahlstrom Metallic Door Co., Jamestown, N. Y.
Kinneer Mfg. Co., Columbus, O.
New Orleans Roof & Metal Co., New Orleans, La.
Richmond Safety Gate Co., Richmond, Ind.
United States Metal Products Co., New York, N. Y.
Victor Mfg. Co., Newburyport, Mass.
- Fireproof Windows. [See Window Frames and Sashes (Fireproof).]**
- Fire Protection Hardware.**
Peters & Son, Jas., Philadelphia, Pa.
- Flanges. (Iron and Steel.)**
American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Construction Co., Phila., Pa.
American Spiral Pipe Works, Chicago, Ill.
American Steam Pump Wks., A. S., New York, N. Y.
Dart Manufacturing Co., E. M., Providence, R. I.
General Fire Extinguisher Co., Providence, R. I.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
McWane Pipe Works, Lynchburg, Va.
National Tube Co., Pittsburg, Pa.
U. S. Cast Iron Pipe & Fdy. Co., New York, N. Y.
Whitlock Coll. Pipe Co., Hartford, Conn.
Wood & Co., R. D., Philadelphia, Pa.
- Flexible Joints.**
Moran Flex. Steam Joint Co., Inc., Louisville, Ky.
- Flooring. (Cement.)**
Dagostin & Angelini Bros., Montgomery, Ala.
- Flooring. (Hardwood, Maple, Oak.)**
Carolina Portland Cement Co., Charleston, S. C.
Northcross Mantel Co., W. J., Memphis, Tenn.
Nashville Harwood Flooring Co., Nashville, Tenn.
- Flour and Grist Mill Machinery and Supplies.**
Caldwell & Sons Co., H. W., Chicago, Ill.
Gibbs Machinery Co., Columbia, S. C.
Nurdyke & Marnon Co., Indianapolis, Ind.
Salem Foundry & Machine Works, Salem, Va.
Starr Co., B. F., Baltimore, Md.
Vestch & Co., E. R., Louisville, Ky.
Wolf Co., Chambersburg, Pa.
- Flushtank Regulator.**
Modern Iron Works, Quincy, Ill.
- Flushtanks.**
Merritt & Co., Camden, N. J.
- Foot Valves.**
Cameron Steam Pump Wks., A. S., New York, N. Y.
- Forges.**
Buffalo Forge Co., Buffalo, N. Y.
Sturtevant Co., B. F., Hyde Park, Mass.
- Forgings.**
Great Southern Automobile Co., Birmingham, Ala.
Richmond Forgings Corporation, Richmond, Va.
Weimer Chain & Iron Co., Lebanon, Pa.
- Forms. (Steel Collapsible.)**
Concrete Form & Engine Co., Detroit, Mich.
- Foundations.**
Underground Constr. Co., The, St. Louis, Mo.
- Foundations. (Open or Pneumatic.)**
Missouri Val. Bridge & Iron Co., Leavenworth, Kan.
- Foundry Equipment and Supplies.**
Paxson Co., J. W., Philadelphia, Pa.
- Frogs. [See Railroad Frogs and Switches.]**
- Fuel Economizer.**
Green Fuel Economizer Co., Matteawan, N. Y.
Sturtevant Co., B. F., Hyde Park, Mass.
- Fuel Oil.**
Gulf Refining Co., Pittsburg, Pa.
Texas Co., The, New York, N. Y.
- Fuel Oil Equipment.**
Petroleum Iron Works Co., Sharon, Pa.
- Furnace Builders.**
Ritter-Conley Mfg. Co., Pittsburg, Pa.
- Fuses, Bases and Fittings.**
Johns-Manville Co., H. W., New York, N. Y.
- Galvanized Steel and Iron.**
American Sheet & Tin Plate Co., Pittsburg, Pa.
J. C. H. Galvanizing Co., Philadelphia, Pa.
La Belle Iron Works, Steubenville, O.
McCalla, Harold, Philadelphia, Pa.
New Orleans Roof & Metal Co., New Orleans, La.
Wood Iron & Steel Co., Alton, Philadelphia, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.
- Gas Blowers. (Turbine.)**
Terry Steam Turbine Co., New York, N. Y.
- Gas Compressors.**
Blaisdell Machinery Co., Bradford, Pa.
Ingersoll-Rand Co., New York, N. Y.
- Gas Engines. [See Engines, Gas.]**
- Gas Holders.**
Bartlett-Hayward Co., The, Baltimore, Md.
Chicago Bridge & Iron Wks., Chicago, Ill.
- Gas Machines.**
Economy Gas Mach. Co., Rochester, N. Y.
- Gas Plants.**
Western Gas Construction Co., Ft. Wayne, Ind.
- Gas Plants and Benches.**
Improved Equipment Co., New York, N. Y.
- Gas Plants. (Coal and Water.)**
Bartlett-Hayward Co., The, Baltimore, Md.
- Gas Producers.**
Bogart Gas Power Eng. Co., Buffalo, N. Y.
De La Vergne Machine Co., New York, N. Y.
Otto Gas Engine Works, Philadelphia, Pa.
Standard Gas Power Co., Atlanta, Ga.
Westinghouse Machine Co., Pittsburg, Pa.
Wood & Co., R. D., Philadelphia, Pa.
- Gasoline and Kerosene.**
Gulf Refining Co., Pittsburg, Pa.
Texas Co., The, New York, N. Y.
- Gas and Steam Fitters' Tools.**
Saunders' Sons, D., Yonkers, N. Y.
- Gaskets. (Rubber.)**
N. J. Car Spring & Rubber Co., Jersey City, N. J.
- Gears.**
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dayton Globe Iron Works Co., Dayton, O.
Dodge Manufacturing Co., Mishawaka, Ind.
Earle Gear & Machine Co., The, Philadelphia, Pa.
Great Southern Automobile Co., Birmingham, Ala.
Jeffrey Mfg. Co., Columbus, O.
Poole Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Trump Mfg. Co., Springfield, O.
- Geologists.**
Clapp, Frederick C., Pittsburgh, Pa.
Froehling & Robertson, Richmond, Va.
- Glass. (Plate, etc.)**
Blawieganer & Co., Memphis, Tenn.
Holoplane Co., Newark, Ohio.
- Governors.**
Pickering Governor Co., Portland, Conn.
- Grain Elevator Supplies.**
Caldwell & Sons Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Co., Nictown (Philadelphia), Pa.
- Granite.**
Harris Granite Quarries Co., Salisbury, N. C.
- Graphite.**
Detroit Graphite Co., Detroit, Mich.
Dixon Crucible Co., Joseph, Jersey City, N. J.
- Grates and Grate Bars.**
Conroy Mfg. Co., North East, Md.
Patch & Son Co., S. B., Streator, Ill.
Thomas Grate Bar Co., Birmingham, Ala.
- Gravel.**
Arundel Sand & Gravel Co., Baltimore, Md.
Cassels Cement Gravel Co., Augusta, Ga.
Lathrop & Co., C. P., Richmond, Va.
- Greases and Lubricating Compounds.**
Cook's Sons, Adam, New York, N. Y.
Galena Signal Oil Co., Franklin, Pa.
Robinson & Son Co., Wm. C., Baltimore, Md.
Texas Co., The, New York, N. Y.
- Grease and Oil Cups and Lubricators.**
Cook's Sons, Adam, New York, N. Y.
- Grinders. (Gypsum, Limestone, etc.)**
Gardner Crusher Co., New York, N. Y.
Williams Pat. Crusher & Pulv. Co., Chicago, Ill.
- Grinding Wheels.**
Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.
- Groovers.**
Huther Bros. Saw Mfg. Co., Rochester, N. Y.
- Gunpowder.**
du Pont de Nemours Powder Co., E. I., Wilmington, Del.
- Hammers. (Steam, Power, Pneumatic.)**
Chicago Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
- Hand Elevators.**
McKenna Bros. Brass Co., Pittsburgh, Pa.
Sidney Elevator Mfg. Co., Sidney, O.
- Handle Machinery. [See Woodworking Mch'y.]**
- Hangers. [See Pulleys, Shafting and Hangers.]**
- Hauling Engines. (Steam Traction.)**
Case Threshing Mach. Co., J. I., Racine, Wis.
- Hay Tools.**
Myers & Bro., F. E., Ashland, O.
- Heater. (Portable, for Bituminous Pavements.)**
Ruggles-Coles Engineering Co., New York, N. Y.
- Heating Apparatus, Engineers and Contractors.**
American Blower Co., Detroit, Mich.
Bartlett-Hayward Co., Baltimore, Md.
Buffalo Forge Co., Buffalo, N. Y.
Monitor Steam Generator Mfg. Co., Balto., Md.
Peck-Hammond Co., The, Cincinnati, O.
Sturtevant Co., B. F., Hyde Park, Mass.
- Hoisting Machinery.**
American Hoist & Derrick Co., St. Paul, Minn.
Brown Hoisting Mch'y. Co., Cleveland, O.
Byers Machine Co., John F., Ravenna, O.
Clyde Iron Works, Duluth, Minn.
Contractors' Plant Mfg. Co., Ltd., Buffalo, N. Y.
Dake Engine Co., Grand Haven, Mich.
Exeter Machine Works, Pittsburg, Pa.
Flory Mfg. Co., S., Bangor, Pa.
Hayward Co., New York, N. Y.
Link-Belt Co., Nictown (Philadelphia), Pa.
Lidgerwood Mfg. Co., New York, N. Y.
Males Co., Cincinnati, O.
- Hoists.**
CHAIN.
Ford Chain Block & Mfg. Co., Philadelphia, Pa.
Speidel, J. G., Reading, Pa.
ELECTRIC.
American Hoist & Derrick Co., St. Paul, Minn.
Lidgerwood Mfg. Co., New York, N. Y.
Monaghan Mch. Co., Chicago, Ill.
Northern Engineering Works, Detroit, Mich.
Patten Mfg. Co., Chattanooga, Tenn.
PNEUMATIC MOTORS.
Chicago Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
Hoops, Bands, etc. (Galvanized.)
J. C. H. Galvanizing Co., Philadelphia, Pa.
McCalla, Harold, Philadelphia, Pa.
Hoops. (Barrel.)
American Steel & Wire Co., Chicago, Ill.
Carnegie Steel Co., Pittsburg, Pa.
Hose.
Eureka Fire Hose Mfg. Co., New York, N. Y.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Hot Water Service Heaters.
Alberger Pump Co., New York, N. Y.
Hydrants.
Bourbon Copper & Brass Wks. Co., Cincinnati, O.
Columbian Iron Works, Chattanooga, Tenn.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
Goulds Mfg. Co., Seneca Falls, N. Y.
Myers & Bro., F. E., Ashland, O.
Wood & Co., R. D., Philadelphia, Pa.
Hydraulic Giants.
American Spiral Pipe Works, Chicago, Ill.
Hydraulic Rams.
Goulds Mfg. Co., Seneca Falls, N. Y.
Rife Engine Co., New York, N. Y.
Ice-making Machinery and Supplies.
Columbus Iron Works Co., Columbus, Ga.
Creamery Package Mfg. Co., Chicago, Ill.
De La Vergne Machine Co., New York, N. Y.
Friel Co., The, Waynesboro, Pa.
Hague, John, St. Louis, Mo.
Remington Machine Co., Wilmington, Del.
Tait-Nordmeyer Eng. Co., St. Louis, Mo.
Vilter Mfg. Co., Milwaukee, Wis.
Vogel Machine Co., Henry, Louisville, Ky.
Wolf Mfg. Co., The Fred W., Chicago, Ill.
York Mfg. Co., York, Pa.
Incorporators. (Companies.)
Delaware Trust Co., Wilmington, Del.
Industrial, Agricultural and Commercial Opportunities.
CITIES AND TOWNS.
Atlanta, Ga., Ga. Bureau of Industry & Imm'gr.
Baltimore, Md., Gas & Electric Co.
Baltimore, Md., J. Lindsey Clark & Co.
Baltimore, Md., N. C. Chamber of Commerce.
Houston, Tex., A. D. Alderson Co.
Morgan City, La., Willard Ditch.
Newport News, Va., Old Dominion Land Co.
Texas City, Tex., Texas City Transportation Co.
RAILROADS.
Atlanta, Birm'gh'm & Atlantic R. R., Atlanta, Ga.
Atchafalaya & West Point R. R. Co., Montgomery, Ala.
Baltimore & Ohio Railroad, Baltimore, Md.
Carolina, Clinchfield & O. Ry., Johnson City, Tenn.
Central of Georgia Ry. Co., Savannah, Ga.
Florida East Coast Rwy., St. Augustine, Fla.
Illinois Central Railroad Co., Chicago, Ill.
Norfolk & Western Railway, Roanoke, Va.
Richmond, Fredericksburg & Potomac Railroad, Ashland, Va.
Seaboard Air Line, Portsmouth, Va.
Southern Railway Co., Washington, D. C.
Industrial Track Work. [See Railways, Ind.]
Injectors.
Jenkins Bros., New York, N. Y.
Sellers & Co., Inc., Wm., Philadelphia, Pa.
Insulating Materials.
Johns-Manville Co., H. W., New York, N. Y.
Insurance.
Hartford Fire Insurance Co., Hartford, Conn.
Hartford Steam Boiler Inspection & Ins. Co., Hartford, Conn.
Maryland Casualty Co., Baltimore, Md.
Interior Trim. (Metallic.)
Dahlstrom Metallic Door Co., Jamestown, N. Y.
U. S. Metal Products Co., New York, N. Y.
Interstate Commerce Practice.
Van Sant, Frank, Washington, D. C.
Iron.
Alabama Con. Coal & Iron Co., Birmingham, Ala.
American Rolling Mill Co., Middletown, O.
La Belle Iron Works, Steubenville, O.
Lebanon Valley Iron & Steel Co., Lebanon, Pa.
Milton Mfg. Co., Milton, Pa.
Republic Iron & Steel Co., Youngstown, O.
Tennessee Coal, Iron & R. R. Co., Birm'gh'm, Ala.
Wood Iron & Steel Co., Alton, Philadelphia, Pa.
Irrigation Machinery.
Blakeslee Mfg. Co., Du Quoin, Ill.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Journals. (Financial.)
Financial Review, New York, N. Y.
Kettles. (Steam Jacket.)
Badger & Sons Co., E. B., Boston, Mass.
Petroleum Iron Works Co., Sharon, Pa.
Key Seater. (Portable.)
Burr & Son, John T., Brooklyn, N. Y.
Knitting Machinery.
Acme Knitting Machine & Needle Co., Franklin Falls, N. H.
Lacquers. (All Purposes.)
Durlaque Mfg. Co., St. Louis, Mo.
Lamp Posts. (Electric, Gas.)
Western Gas Construction Co., Ft. Wayne, Ind.
Lamps. (Arc and Incandescent.)
Boston Incandescent Lamp Co., Danvers, Mass.
Columbia Incandescent Lamp Co., St. Louis, Mo.
Doubleday-Hill Electric Co., Pittsburg, Pa.
Fosteria Incandescent Lamp Co., Fosteria, Pa.
General Electric Co., Schenectady, N. Y.
Kentucky Electric Co., Owensboro, Ky.
Lee Electric Co., Baltimore, Md.
Piedmont Electric Co., Asheville, N. C.
Western Electric Co., New York, N. Y.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

- Laths.**
Beller & Wilson, Roanoke, Va.
Clark & Co., J. Lindsey, Baltimore, Md.
Fried & Co., Albert, Brunswick, Ga.
Henderson, B. B., Washington, D. C.
Hinchey & Co., J. T., Atlanta, Ga.
Harris & Co., Abbott, Norfolk, Va.
Hessman & Co., S. L., Norfolk, Va.
Robertson, W. W., Norfolk, Va.
- Lath. (Expanded Metal.)**
Carolina Portland Cement Co., Charleston, S. C.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Lathes. (Engine.)**
Greaves, Kinsman & Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Miami Valley Mach. Tool Co., Dayton, O.
- Lawn Furniture.**
Belles Iron & Wire Works, J. E., Detroit, Mich.
Dufur & Co., Baltimore, Md.
Dufur, Baggett & Co., Baltimore, Md.
- Leadite.**
Leadite Co., The, Philadelphia, Pa.
- Lighting Equipment.**
Hilphane Co., Newark, Ohio.
- Lime.**
Carolina Portland Cement Co., Charleston, S. C.
Security Cement & Lime Co., Baltimore, Md.
Southern Lime & Cement Co., Charleston, S. C.
Tidewater Portland Cement Co., Baltimore, Md.
- Lime. (Hydrated.)**
Security Cement & Lime Co., Baltimore, Md.
Tidewater Portland Cement Co., Baltimore, Md.
- Lime Kilns and Equipment.**
Improved Equipment Co., New York, N. Y.
- Limestone Products.**
Security Cement & Lime Co., Baltimore, Md.
- Liquor Filters.**
International Filter Co., Chicago, Ill.
- Lithographers, Engravers.**
Young & Selden Co., Baltimore, Md.
- Lockers. (Metal.)**
Keighley Metal Ceiling Mfg. Co., S. Pittsburg, Pa.
- Locomotives.**
INDUSTRIAL.
American Locomotive Co., New York, N. Y.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Bryer Machine Co., John F., Ravens, O.
Climax Mfg. Co., Corry, Pa.
Davenport Locomotive Works, Davenport, Ia.
Jeffrey Mfg. Co., Columbus, O.
Lima Locomotive & Machine Co., Lima, O.
Males Co., Cincinnati, O.
Porter Co., H. K., Pittsburg, Pa.
Vulcan Iron Works, Wilkes-Barre, Pa.
- RAILWAY.**
American Locomotive Co., New York, N. Y.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Lima Locomotive & Machine Co., Lima, O.
Males Co., Cincinnati, O.
Southern Supply Co., Norfolk, Va.
- Looms and Weaving Machinery.**
Draper Co., Hopedale, Mass.
Mason Machine Works, Taunton, Mass.
- Lumber.**
Industrial Lumber Co., Elizabeth, La.
Mason & Felton Lumber Co., Macon, Ga.
- Lumber. (Heavy Construction, Pitch Pine, etc.)**
Mason & Felton Lumber Co., Macon, Ga.
National Lumber & Creosote Co., Texarkana, Ark.
Naylor & Co., S. E., Gulfport, Miss.
- Lumber. (Yellow Pine.)**
Industrial Lumber Co., Elizabeth, La.
- Lumber Buggies.**
Bole Steam Feed Works, Meridian, Miss.
- Lumber Stackers.**
Bole Steam Feed Works, Meridian, Miss.
- Machinery. (Special.)**
Black & Decker Mfg. Co., Baltimore, Md.
Blum Co., E. W., Brooklyn, N. Y.
Kline, Lewis T., Alpena, Mich.
Leffler & Co., Charles, Brooklyn, N. Y.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Rogersford Fdry. & Mch. Wks., Rogersford, Pa.
Stratton & Bragg Co., Petersburg, Va.
Universal Telegraphic Co., Baltimore, Md.
- Machinery and Supplies. (New and Second-Hand Bargains.)**
Ballo, Iron, Steel & Metal Co., Baltimore, Md.
Ballo Metal Mchry. & Supply Co., Baltimore, Md.
Boston Iron & Metal Co., Baltimore, Md.
Chicago House Wrecking Co., Chicago, Ill.
Cleveland Belling & Machinery Co., Cleveland, O.
Dorner Railway Equipment Co., Chicago, Ill.
Dunets & Son, New York, N. Y.
Elliott's Sons Co., Henry A., Philadelphia, Pa.
Erie Bros. & Co., New York, N. Y.
Illinois Machinery Co., Chicago, Ill.
Kilian, Daniel, Philadelphia, Pa.
Lehman, Charles T., Birmingham, Ala.
Lester & Co., E. Philadelphia, Pa.
Linton, W. J., New York, N. Y.
Lodge & Shipley Machine Tool Co., Cincinnati, O.
Marine Metal & Supply Co., New York, N. Y.
Mathes Iron & Metal Co., G. St. Louis, Mo.
Nuttall, J., Philadelphia, Pa.
Plannmiller Engineering Co., Chicago, Ill.
Pickett, H. W., Philadelphia, Pa.
Pittsburgh Mchry. & Equip. Co., Pittsburgh, Pa.
Prentiss Tool & Supply Co., New York, N. Y.
Randle Machinery Co., Cincinnati, O.
Read Co., Howard W., Philadelphia, Pa.
Rier Machinery Co., New York, N. Y.
Samuel, Frank, Philadelphia, Pa.
Seyfert's Sons, Inc., L. F., Philadelphia, Pa.
Southern Supply Co., Norfolk, Va.
Tampa Machinery Exchange, Tampa, Fla.
Texas Supply Co., Beaumont, Tex.
Thompson, Jr., Co., Jos. H., New York, N. Y.
Toomey, Francis, Philadelphia, Pa.
Yearsley, Thomas, Philadelphia, Pa.
- Machine Tools.**
Greaves, Kinsman & Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Miami Valley Mach. Tool Co., Dayton, O.
- Machinists. (Engineers.)**
American Mch. & Mfg. Co., Charlotte, N. C.
Roanoke Iron Works, Inc., Roanoke, Va.
Stratton & Bragg Co., Petersburg, Va.
- Magnesia Materials.**
Johns-Manville Co., H. W., New York, N. Y.
- Magnetite. (Dead Burned.)**
Harbison-Walker Refractories Co., Pittsburg, Pa.
- Magnets. (Electric Lift.)**
Browning Engineering Co., Cleveland, O.
- Magnet Electro. (For Cottonseed, Linters and Hullers.)**
Dixie Electro Magnet Co., Memphis, Tenn.
- Magnetic Separators.**
Paxson Co., J. W., Philadelphia, Pa.
- Mail Chutes.**
Cutler Mail Chute Co., Rochester, N. Y.
- Mantels. (Wooden.)**
Northcross Mantel Co., W. J., Memphis, Tenn.
- Marble Work. (Interior.)**
Dagostin & Angelini Bros., Montgomery, Ala.
Southern Mosaic Tile Co., Birmingham, Ala.
- Mechanical Draft.**
American Blower Co., Detroit, Mich.
Buffalo Steam Pump Co., Buffalo, N. Y.
Garden City Fan Co., Chicago, Ill.
Sturtevant Co., B. F., Hyde Park, Mass.
- Metal Ceilings. [See Ceilings, Metal.]**
- Metaline.**
North Amer. Metaline Co., Long Island City, N. Y.
- Metal Culverts. [See Culverts.] (Corrugated Metal.)**
- Metal Polish.**
Hoffman, Geo. W., Indianapolis, Ind.
- Metal Shingles.**
Chattanooga Rfg. & Fdry. Co., Chattanooga, Tenn.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Manufacturing Co., Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
- Metal Window Frames and Sashes.**
Detroit Steel Products Co., Detroit, Mich.
Edwards Mfg. Co., The, Cincinnati, O.
Keighley Metal Cell. & Mfg. Co., S. Pittsburg, Pa.
United States Metal Products Co., New York, N. Y.
Voigtmann & Co., Chicago, Ill.
- Metal Work. (Stamped and Embossed Hotel Checks, Key Tags, etc.)**
American Railway Supply Co., New York, N. Y.
- Metal-Working Machinery.**
Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
Gibbs Machinery Co., Columbia, S. C.
Leffler & Co., Charles, Brooklyn, N. Y.
Price Machinery Co., S. M., Norfolk, Va.
Rogersford Fdry. & Mch. Co., Rogersford, Pa.
- Micrometers, Calipers, Etc.**
Starrett Co., L. S., Athol, Mass.
- Milk Filters. (Liquor, Milk, etc.)**
International Filter Co., Chicago, Ill.
- Mill Engineers and Architects.**
Lockwood, Greene & Co., Boston, Mass.
Sririne, J. E., Greenville, S. C.
- Mill Supplies.**
Appomattox Iron Works, Petersburg, Va.
Bailey-Lebby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Gainesville Iron Works, Gainesville, Ga.
Greenwald Co., J. & E., Cincinnati, O.
Lombard Iron Works, Augusta, Ga.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Mecklenburg Iron Works, Charlotte, N. C.
Nordyke & Marrison Co., Indianapolis, Ind.
Salem Foundry & Machine Works, Salem, Va.
Smith-Courtney Co., Richmond, Va.
Starr Co., B. F., Baltimore, Md.
Stratton & Bragg Co., Petersburg, Va.
Ward-Becke Co., Washington, D. C.
Wolf Co., Chambersburg, Pa.
- Mining Machinery. (Gold, Copper, Plate, etc.)**
Bartlett & Snow Co., C. O., Cleveland, O.
Jeffrey Mfg. Co., Columbus, O.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Mecklenburg Iron Works, Charlotte, N. C.
Nashville Armature Works, Nashville, Tenn.
Power & Mining Machinery Co., Cudahy, Wis.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
- Mixer Machinery.**
Smith Co., T. L., Atlanta, Ga.
- Mixing Machinery.**
Dunning, W. D., Syracuse, N. Y.
Lynn-Superior Co., The, Cincinnati, O.
- Mortar Colors.**
Chattanooga Paint Co., Chattanooga, Tenn.
- Motor Trucks.**
Kelly Motor Truck Co., Springfield, O.
Schacht Motor Car Co., Cincinnati, Ohio.
- Mouldings, Casings, etc.**
Mason & Felton Lumber Co., Macon, Ga.
- Nails and Spikes.**
American Steel & Wire Co., Chicago, Ill.
Hoffman & Co., R. C., Baltimore, Md.
Lebanon Valley Iron & Steel Co., Lebanon, Pa.
Republic Iron & Steel Co., Youngstown, O.
West Virginia Rail Co., The, Huntington, W. Va.
Youngstown Sheet & Tube Co., Youngstown, O.
- Nitre Pots, Eggs.**
Pratt Engineering & Mach. Co., Atlanta, Ga.
- Nuts. [See Bolts, Nuts, Rivets, etc.]**
- Office Furniture.**
Quincy Show Case Works, Quincy, Ill.
Ruse & Thompson, Baltimore, Md.
- Oils. (Lubricating, etc.)**
Borne-Seymer Co., New York, N. Y.
Galena Signal Oil Co., Franklin, Pa.
Gulf Refining Co., Pittsburg, Pa.
Robinson & Son Co., Wm. C., Baltimore, Md.
Texas Co., The, New York, N. Y.
- Oil-Burning Appliances.**
Petroleum Iron Works Co., Sharon, Pa.
- Oil Cans.**
Wall Mfg. Supply Co., P., Allegheny, Pa.
- Oil Engines. [See Engines (Oil).]**
- Oil Separators.**
Stewart Heater Co., Buffalo, N. Y.
- Oil Stones.**
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.
- Oil-Well Machinery.**
Keystone Steam Well Mach. Co., Beaver Falls, Pa.
Williams Bros., Ithaca, N. Y.
- Ore Briquetting Machinery.**
Devillers, Robert, Brooklyn, N. Y.
- Ornamental Iron Work.**
Belmont Iron Works, Inc., Philadelphia, Pa.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Chattanooga Iron & Wire Works, Chattanooga, Tenn.
Chesapeake Iron Works, Baltimore, Md.
Dow Wire Works Co., Louisville, Ky.
Ohio Elevator & Machine Co., The, Columbus, O.
Roanoke Iron Works, Inc., Roanoke, Va.
Schreiber & Sons Co., The, L., Cincinnati, O.
Snead Architectural Iron Works, Louisville, Ky.
Southern Wire & Iron Mfg. Co., Dallas, Tex.
- Packing. (Asbestos, Metallic, Rubber, Leather, etc.)**
American Huhn Packing Co., New York, N. Y.
Jenkins Bros., New York, N. Y.
Johns-Manville Co., H. W., New York, N. Y.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Power Specialty Co., New York, N. Y.
- Paint. (Bridge.)**
Detroit Graphite Co., Detroit, Mich.
Dixon Crucible Co., Jon., Jersey City, N. J.
Maryland Steel Co., Paint Dept., Sparrows Point, Md.
National Roofing Co., Tonawanda, N. Y.
- Paints. (Cold Water.)**
Wilhelm Co., A., New York, N. Y.
- Paint. (Metal Preservative.)**
Detroit Graphite Co., Detroit, Mich.
Maryland Steel Co., Paint Dept., Sparrows Point, Md.
National Roofing Co., Tonawanda, N. Y.
Wilhelm Co., A., New York, N. Y.
- Paint. (Roofing, Building, etc.)**
Armstrong Mfg. Co., The, Richmond, Va.
Bird & Son, F. W., East Walpole, Mass.
Cameron & Barkley Co., Charleston, S. C.
Carolina Portland Cement Co., Charleston, S. C.
Chattanooga Paint Co., Chattanooga, Tenn.
Detroit Graphite Co., Detroit, Mich.
Dixon Crucible Co., Jon., Jersey City, N. J.
Gibbs Machinery Co., Columbia, S. C.
Maryland Steel Co., Paint Dept., Sparrows Point, Md.
National Roofing Co., Tonawanda, N. Y.
Standard Paint Co., New York, N. Y.
Wilhelm Co., A., New York, N. Y.
- Painting. (Contractors for Bridges, Buildings, etc.)**
Dinaco & Bro., A., Pittsburg, Pa.
- Paint-making Machinery.**
Campbell, P. F., Philadelphia, Pa.
Lynn Superior Co., The, Cincinnati, O.
- Paper. (Roofing, Building, Sheathing, etc.)**
Armstrong Mfg. Co., Richmond, Va.
Barrett Mfg. Co., Philadelphia, Pa.
Berlin Mills Co., Portland, Maine.
Bird & Son, F. W., East Walpole, Mass.
Cameron & Barkley Co., Charleston, S. C.
Southeastern Lime & Cement Co., Charleston, S. C.
- Paper. (Wrapping.)**
Berlin Mills Co., Portland, Maine.
- Patent Attorneys.**
Brown, Eugene C., Washington, D. C.
Chandler & Co., H. Ellis, Washington, D. C.
Chandler & Chandler, Washington, D. C.
Evans & Co., Victor J., Washington, D. C.
Hamlin, Geo. E., Washington, D. C.
Lacey, R. S. & A. B., Washington, D. C.
Owen, Richard B., Washington, D. C.
- Patterns.**
Roanoke Iron Works, Inc., Roanoke, Va.
- Pavement Filler.**
Barrett Mfg. Co., Philadelphia, Pa.
- Paving. (Contractors for Creosoted Wood Block.)**
Creosoted Wood Block Pav. Co., New Orleans, La.
- Paving. (Road and Street, etc.)**
Barber Asphalt Paving Co., Philadelphia, Pa.
- Paving Blocks. (Granite.)**
Harris Granite Quarries Co., Salisbury, N. C.
- Paving Blocks. (Wood-Creosote.)**
Gulfport Creosoting Co., Gulfport, Miss.
Southern Wood Preserving Co., Atlanta, Ga.
U. S. Wood Preserving Co., New York, N. Y.
- Paving Brick.**
Carlyle Paving Brick Co., Portsmouth, O.
Copeland-Ingalls Shale Brick Co., Birmingham, Ala.
- Paving Machines. (Bituminous Materials.)**
Smith Co., T. L., Atlanta, Ga.
- Perforated Metal.**
Caldwell & Son, H. W., Chicago, Ill.
Erdle Perforating Co., Rochester, N. Y.
Hendrick Mfg. Co., The, Carbondale, Pa.
Mundt & Sons, Charles, Jersey City, N. J.
- Perspectives. (Water Color, for Architects.)**
Alger & Smith, Atlanta, Ga.
- Petroleum Refiners.**
Gulf Refining Co., Pittsburg, Pa.
Standard Oil Co., Cincinnati, O.
- Phosphate Machinery.**
Alsing Engineering Co., J. R., New York, N. Y.
American Process Co., New York, N. Y.
Bailey-Lebby Co., The, Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Link-Belt Co., Nictown (Philadelphia), Pa.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Pratt Engineering & Mach. Co., Atlanta, Ga.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Vaik & Murdoch Iron Works, Charleston, S. C.
Walker & Elliott, Wilmington, Del.
- Phosphor-Bronze. (Wire Rods, Sheets.)**
Phosphor-Bronze Smelting Co., Philadelphia, Pa.
- Photo-Engravers.**
Baltimore Maryland Engr. Co., Baltimore, Md.
- Pig Iron.**
Alabama Con. Coal & Iron Co., Birmingham, Ala.
Hammond-Bryd Co., The, Birmingham, Ala.
La Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Youngstown, O.
Rogers, Brown & Co., Cincinnati, O.
Tennessee Coal, Iron & R. R. Co., B'gh'm, Ala.
- Pile Drivers.**
Browning Engineering Co., Cleveland, O.
Bucyrus Co., The, Milwaukee, Wis.
Vulcan Iron Works, Chicago, Ill.
- Piling. (Concrete.)**
Underground Constr. Co., The, St. Louis, Mo.
- Piling. (Creosoted.)**
Gulfport Creosoting Co., Gulfport, Miss.
Intern'l Creosoting & Const. Co., Galveston, Tex.
Southern Creosoting Co., Ltd., Siledeil, La.
- Pillow Blocks.**
Caldwell Co., Inc., W. E., Louisville, Ky.
Dodge Manufacturing Co., Mishawaka, Ind.
Golden's Foundry & Machine Co., Columbus, Ga.
- Pine Tar.**
Atlantic Turpentine & Refin'g Co., Savannah, Ga.
- Pipe. (Cast Iron.)**
American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Construction Co., Phila., Pa.
General Fire Extinguisher Co., Providence, R. I.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
McWane Pipe Works, Lynchburg, Va.
U. S. Cast Iron Pipe & Fdry. Co., New York, N. Y.
Wood & Co., R. D., Philadelphia, Pa.
- Pipe. (Coll.)**
Columbus Iron Works Co., Columbus, Ga.
Frick Co., The, Waynesboro, Pa.
National Pipe Bending Co., New Haven, Conn.
Whitlock Coil Pipe Co., Hartford, Conn.
Wolf Co., Fred W., Chicago, Ill.
York Mfg. Co., York, Pa.
- Pipe. (Corrugated Culvert.)**
American Rolling Mill Co., Middletown, O.
Canton Culvert Co., The, Canton, O.
Dixie Culvert & Metal Co., Atlanta, Ga.
Kentucky Culvert Mfg. Co., Buechel, Ky.
North Carolina Metal Culv. Co., Greensboro, N. C.
Virginia Metal Culvert Co., Roanoke, Va.
Virginia Railway Supply Co., Norfolk, Va.
- Pipe. (Riveted.)**
Abendroth & Root Mfg. Co., Newburgh, N. Y.
Keeler Co., E., Williamsport, Pa.
Petroleum Iron Works Co., Sharon, Pa.
- Pipe. (Spiral Riveted.)**
Abendroth & Root Mfg. Co., Newburgh, N. Y.
American Spiral Pipe Works, Chicago, Ill.
- Pipe. (Wood.)**
Wyckoff & Son Co., A., Elmira, N. Y.
- Pipe. (Wrought.)**
General Fire Extinguisher Co., Providence, R. I.
La Belle Iron Works, Steubenville, O.
National Tube Co., Pittsburg, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.
- Pipe Bends.**
Columbus Iron Works Co., Columbus, Ga.
Whitlock Coil Pipe Co., Hartford, Conn.
- Pipe Covering. (Steam.)**
Johns-Manville Co., H. W., New York, N. Y.
Southern Pipe Covering Co., Inc., Richmond, Va.
Wyckoff & Son Co., A., Elmira, N. Y.
- Pipe Cutting and Threading Machinery.**
Saunders' Sons, D., Yonkers, N. Y.
- Pipe Fittings.**
American Cast Iron Pipe Co., Birmingham, Ala.
Columbus Iron Works Co., Columbus, Ga.
General Fire Extinguisher Co., Providence, R. I.
Wolf Co., Fred W., Chicago, Ill.
York Mfg. Co., York, Pa.
- Pipe Jointing. (Gas and Water Main.)**
Leadite Co., The, Philadelphia, Pa.
- Pipe Locator.**
Modern Iron Works, Quincy, Ill.
- Pipe Unions and Joints.**
Dart Mfg. Co., E. M., Providence, R. I.
National Tube Co., Pittsburg, Pa.
Whitlock Coil Pipe Co., Hartford, Conn.
- Pipe Wrenches and Cutters.**
Saunders' Sons, D., Yonkers, N. Y.
- Pitch.**
Barrett Mfg. Co., Philadelphia, Pa.
- Planers. (Metal.)**
Manning, Maxwell & Moore, Inc., New York, N. Y.
- Planing Mill Work.**
Mason & Felton Lumber Co., Macon, Ga.
- Plaster of Paris.**
King & Co., J. B., New York, N. Y.
- Plaster.**
Security Cement & Lime Co., Baltimore, Md.
- Plaster. (Asbestos Cement, Plaster of Paris.)**
King & Co., J. B., New York, N. Y.
- Plaster Boards.**
King & Co., J. B., New York, N. Y.
Plaster Products Co., Hampton, Va.
- Plaster Machinery.**
Bartlett & Snow Co., C. O., Cleveland, O.
- Plates.**
Cincinnati Iron & Steel Co., Cincinnati, O.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.
- Plugs. (Wall.)**
Wicks & Co., Milton O., Glen Cove, N. Y.
- Pneumatic Tools. [See Tools—Pneumatic.]**
- Poles. (Transmission Line; Steel.)**
Ritter-Conley Mfg. Co., Pittsburg, Pa.
- Polishing Machinery. (Wheels and Blocks.)**
Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Springfield Tire & Rubber Co., Springfield, O.
Vitrided Wheel Co., Westfield, Mass.
- Power Transmission Machinery.**
Bailey-Lebby Co., Charleston, S. C.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dayton Globe Iron Works Co., Dayton, O.
Dodge Manufacturing Co., Mishawaka, Ind.
Eclipse Wood Pulley Co., Inc., Berlin, Pa.
Golden's Foundry & Machine Co., Columbus, Ga.
Greenwald Co., L. & E., Cincinnati, O.
Jeffrey Mfg. Co., Columbus, O.
Jones & Laughlin Steel Co., Pittsburg, Pa.
Lane Mfg. Co., Montpelier, Vt.
Link-Belt Co., Nictown (Philadelphia), Pa.
Morse Chain Co., Ithaca, N. Y.
Nordyke & Marrison Co., Indianapolis, Ind.
Poole Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Price Machinery Co., S. M., Norfolk, Va.
Schofield's Sons Co., J. S., Macon, Ga.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Presses. (Baling, Cottonseed Oil, etc., Hydraulic and Power.)**
Boomer & Boschert Press Co., Syracuse, N. Y.
Cardwell Machine Co., Richmond, Va.
Continental Gin Co., Birmingham, Ala.
Gibbs Machinery Co., Columbia, S. C.
- Presses. (Stamping.)**
Rissa Co., E. W., Brooklyn, N. Y.
Leffler & Co., Charles, Brooklyn, N. Y.
- Preventive for Sap Stain.**
Church & Dwight Co., New York, N. Y.
- Printers. (Book, Catalog, Job, etc.)**
Fleet-McGhee Co., Baltimore, Md.
Franklin Press Co., Petersburg, Va.

- Protector Steel.** (Concrete Carb. Steps, etc.)
Steel Protected Concrete Co., Philadelphia, Pa.
- Pulleys.** (Friction Clutch.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dodge Manufacturing Co., Milwaukee, Ind.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Stinchell Clutch Co., Baltimore, Md.
Woods' Sons Co., T. B., Chambersburg, Pa.
- STEEL SPLIT.**
American Pulley Co., Philadelphia, Pa.
Dodge Manufacturing Co., Milwaukee, Ind.
- WOOD SPLIT.**
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Milwaukee, Ind.
Edgely Wood Pulley Co., Inc., Berlin, Pa.
Lane Mfg. Co., Montpelier, Vt.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Saginaw Mfg. Co., Saginaw, Mich.
Salem Foundry & Machine Works, Salem, Va.
- Pulleys, Shafting and Hangers.**
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dodge Manufacturing Co., Milwaukee, Ind.
Edgely Wood Pulley Co., Inc., Berlin, Pa.
Golden's Foundry & Machine Co., Columbus, Ga.
Greenwald Co., I. & E., Cincinnati, O.
Jeffrey Mfg. Co., Columbus, O.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Lane Mfg. Co., Montpelier, Vt.
Lins-Bell Co., Newtown (Philadelphia), Pa.
Norden & Marmon Co., Indianapolis, Ind.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Standard Roller Bearing Co., Philadelphia, Pa.
Woods' Sons Co., T. B., Chambersburg, Pa.
- Pumps. (Centrifugal.)**
Alberger Pump Co., New York, N. Y.
Buffalo Steam Pump Co., Buffalo, N. Y.
De Laval Steam Turbine Co., Trenton, N. J.
Emerson Steam Pump Co., Alexandria, Va.
Erie Pump & Engine Works, Erie, Pa.
Goulds Mfg. Co., Seneca Falls, N. Y.
Morris Machine Works, Baldwinville, N. Y.
Wheeler Condenser & Eng. Co., New York, N. Y.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, H. R., New York, N. Y.
- Pumps. (Hydraulic.)**
Buffalo Steam Pump Co., Buffalo, N. Y.
Cardwell Machine Co., Richmond, Va.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Emerson Steam Pump Co., Alexandria, Va.
Erie Pump & Engine Wks., Erie, Pa.
Goulds Mfg. Co., Seneca Falls, N. Y.
McGowan Co., John H., Cincinnati, O.
Worthington, H. R., New York, N. Y.
- Pumps. (Lift and Force.)**
Goulds Mfg. Co., Seneca Falls, N. Y.
Ingersoll-Rand Co., New York, N. Y.
- Pumps. (Odorless and Exhausting.)**
Goulds Mfg. Co., Seneca Falls, N. Y.
- Pumps. (Pneumatic.)**
Ingersoll-Rand Co., New York, N. Y.
- Pumps. (Power Boiler Feed.)**
Alberger Pump Co., New York, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Goulds Mfg. Co., Seneca Falls, N. Y.
McGowan Co., John H., Cincinnati, O.
Moffatt Machine Mfg. Co., Charlotte, N. C.
Murray Iron Works Co., Burlington, Ia.
Myers & Bros., F. E., Ashland, O.
Union Steam Pump Co., Battle Creek, Mich.
Worthington, H. R., New York, N. Y.
- Pumps. (Rotary.)**
Goulds Mfg. Co., Seneca Falls, N. Y.
- Pumps. (Steam.)**
Blakeslee Mfg. Co., Du Quoin, Ill.
Buffalo Steam Pump Co., Buffalo, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Cameron & Barkley Co., Charleston, S. C.
Cook Well Co., The, St. Louis, Mo.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Deane Steam Pump Co., Holyoke, Mass.
Gibbs Machinery Co., Columbus, S. C.
Goulds Mfg. Co., Seneca Falls, N. Y.
Hooen, Owen, Reutcher Co., Hamilton, O.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
McGowan Co., John H., Cincinnati, O.
Murray Iron Works Co., Burlington, Ia.
Price Machine Co., M. M., Norfolk, Va.
Sydney Pump & Well Co., Richmond, Va.
Union Steam Pump Co., Battle Creek, Mich.
Wheeler Condenser & Eng. Co., New York, N. Y.
Worthington, H. R., New York, N. Y.
- Pumps. (Trench.)**
C. H. & E. Mfg. Co., Milwaukee, Wis.
Goulds Mfg. Co., Seneca Falls, N. Y.
- Pumps. (Vacuum.)**
Alberger Pump Co., New York, N. Y.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Goulds Mfg. Co., Seneca Falls, N. Y.
Smith Co., T. L., Atlanta, Ga.
Union Steam Pump Co., Battle Creek, Mich.
Wheeler Condenser & Eng. Co., New York, N. Y.
- Pumping Machinery.**
Allis-Chalmers Co., Milwaukee, Wis.
Blakeslee Mfg. Co., Du Quoin, Ill.
Cameron Steam Pump Wks., A. S., New York, N. Y.
C. H. & E. Mfg. Co., Milwaukee, Wis.
Cook Well Co., The, St. Louis, Mo.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Deane Steam Pump Co., Holyoke, Mass.
Deming Co., Salem, O.
Erie Pump & Engine Works, Erie, Pa.
Fairbanks, Morse & Co., Chicago, Ill.
Goulds Mfg. Co., Seneca Falls, N. Y.
Hooen, Owen, Reutcher Co., Hamilton, O.
McGowan Co., John H., Cincinnati, O.
Moffatt Machine Mfg. Co., Charlotte, N. C.
Morris Machine Works, Baldwinville, N. Y.
Myers & Bros., F. E., Ashland, O.
Purser, J. E., Charlotte, N. C.
Sydney Pump & Well Co., Richmond, Va.
Union Steam Pump Co., Battle Creek, Mich.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, H. R., New York, N. Y.
- Punching and Shearing Machinery.**
Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
Roversford Foundry & Mach. Co., Roversford, Pa.
- Pyrites Burners.**
Pratt Engineering & Mach. Co., Atlanta, Ga.
- Quarrying and Stonecutting Machinery.**
Ingersoll-Rand Co., New York, N. Y.
- Railings, Grilles, etc. (Brass.)**
McKeena Bros. Brass Co., Pittsburgh, Pa.
- Railroads. (Agricultural and Industrial Opportunities.)** [See Industrial, Agricultural and Commercial Opportunities.]
- Railroads. (Passenger Department.)**
Illinois Central Railroad, Chicago, Ill.
- Railroad Equipment and Supplies. (New and Second-hand.)**
American Frog & Switch Co., Hamilton, O.
American Locomotive Co., New York, N. Y.
American Valve & Meter Co., Cincinnati, O.
Bailley-Lebby Co., The, Charleston, S. C.
Birmingham Equipment & Supply Co., Chicago, Ill.
Birmingham Rail & Loco. Co., Birmingham, Ala.
Boston Iron & Metal Co., Baltimore, Md.
Cincinnati Frog & Switch Co., Cincinnati, O.
Foster Co., L. B., Pittsburgh, Pa.
Georgia Car & Locomotive Co., Atlanta, Ga.
Hoffman & Co., R. C., Baltimore, Md.
Indiana Steel & Iron Co., Pittsburgh, Pa.
Kilby Frog & Switch Co., Birmingham, Ala.
Macleary, J. H., Suffolk, Va.
Males Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Maryland Equipment & Supply Co., Baltimore, Md.
Mathies Iron & Metal Co., G. St. Louis, Mo.
Miles & Turner Co., Atlanta, Ga.
National Iron & Steel Co., Houston, Tex.
Newhall Eng. Co., Geo. M., Philadelphia, Pa.
Pickett, H. W., Philadelphia, Pa.
Read Co., Howard W., Philadelphia, Pa.
Robinson & Orr, Pittsburg, Pa.
Sherwood, E. C., New York, N. Y.
Smith-Courtney Co., Richmond, Va.
Southern Iron & Equipment Co., Atlanta, Ga.
Southern Supply Co., Norfolk, Va.
Steel Rail Supply Co., The, New York, N. Y.
United States Lath Co., Cumberland, Md.
Vulcan Iron Works, Wilkes-Barre, Pa.
Warner Equipment Co., Cincinnati, O.
Weir Frog Co., Cincinnati, O.
West Virginia Rail Co., The, Huntington, W. Va.
Wilson & Co., E. H., Philadelphia, Pa.
Zelicker Supply Co., Walter A., St. Louis, Mo.
- Railroad Frogs and Switches.**
American Frog & Switch Co., Hamilton, O.
Cincinnati Frog & Switch Co., Cincinnati, O.
Kilby Frog & Switch Co., Birmingham, Ala.
Mathies Iron & Metal Co., G. St. Louis, Mo.
May & Turner Co., Atlanta, Ga.
Robinson & Orr, Pittsburg, Pa.
Sweet's Steel Co., Williamsport, Pa.
Weir Frog Co., Cincinnati, O.
- Rails. (Steel.)**
Baldwin Equipment & Supply Co., Chicago, Ill.
Carnegie Steel Co., Pittsburgh, Pa.
Foster Co., L. B., Pittsburgh, Pa.
Franks, J. E., Atlanta, Ga.
Hoffman & Co., R. C., Baltimore, Md.
Hunt Co., C. W., West New Brighton, N. Y.
Hyde Bros. & Co., Pittsburg, Pa.
Indiana Steel & Iron Co., Pittsburgh, Pa.
Levis & Co., Henry, Philadelphia, Pa.
Macleary, J. H., Suffolk, Va.
Mathies Iron & Metal Co., G. St. Louis, Mo.
May & Turner Co., Atlanta, Ga.
National Iron & Steel Co., Houston, Tex.
Newhall Eng. Co., Geo. M., Philadelphia, Pa.
Republie Iron & Steel Co., Youngstown, O.
Robinson & Orr, Pittsburg, Pa.
Sherwood, E. C., New York, N. Y.
Southern Iron & Equipment Co., Atlanta, Ga.
Steel Rail Supply Co., The, New York, N. Y.
Sweet's Steel Co., Williamsport, Pa.
Tennessee Coal, Iron & R. R. Co., B'gh'm, Ala.
United States Rail Co., Cumberland, Md.
West Virginia Rail Co., The, Huntington, W. Va.
Wilson & Co., E. H., Philadelphia, Pa.
Zelicker Supply Co., Walter A., St. Louis, Mo.
- Rail Braces, Crossings, etc. [See R. R. Frogs and Switches.]**
- Railways. (Industrial.)**
Chase Fdry. & Mfg. Co., Columbus, O.
Hunt Co., C. W., West New Brighton, N. Y.
Lins-Bell Co., Newtown (Philadelphia), Pa.
- Rams. (Hydraulic.)** [See Hydraulic Rams.]
- Reamers.**
Morse Twist Drill & Mach. Co., New Bedford, Mass.
- Reflectors.**
Holophane Co., Newark, Ohio.
- Refrigerating Machinery and Supplies.**
American Hub Packing Co., New York, N. Y.
- Reinforcing Bars.**
Carnegie Steel Co., Pittsburgh, Pa.
Concrete Steel Co., New York, N. Y.
Concrete Steel Engineering Co., New York, N. Y.
Franklin Steel Co., Franklin, Pa.
- Repairing. (Armatures and Elec. App.)**
Nashville Armature Works, Nashville, Tenn.
- Repairing. (Power Plants.)**
Strickland Mch. Co., Richmond, Va.
- Riveters. (Pneumatic.)**
Chicago Pneumatic Tool Co., Chicago, Ill.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
- Road Machinery.**
Austin-Western Co., Ltd., The, Chicago, Ill.
Buffalo Steam Roller Co., Buffalo, N. Y.
Case Threshing Mach. Co., J. I., Racine, Wis.
Iroquois Iron Works, Buffalo, N. Y.
Kelly Springfield Road Roller Co., Springfield, O.
Syracuse Chilled Plow Co., Syracuse, N. Y.
Universal Road Mch. Co., Kingston, N. Y.
- Roadmaking Materials.**
Barber Asphalt Paving Co., Philadelphia, Pa.
Standard Oil Co., Inc., Road Oil Dept.
Texas Co., The, New York, N. Y.
- Road Roller. (Steam.)**
Austin-Western Co., Ltd., The, Chicago, Ill.
Buffalo Steam Roller Co., Buffalo, N. Y.
Case Threshing Mach. Co., J. I., Racine, Wis.
Iroquois Iron Works, Buffalo, N. Y.
Kelly Springfield Road Roller Co., Springfield, O.
Universal Road Mch. Co., Kingston, N. Y.
- Road Plows.**
Case Threshing Mach. Co., J. I., Racine, Wis.
Syracuse Chilled Plow Co., Syracuse, N. Y.
- Road Preservative.**
Gulf Refining Co., Pittsburg, Pa.
Standard Oil Co., Inc., Road Oil Dept.
Texas Co., The, New York, N. Y.
- Rock Crushers. [See Crushers, Rock.]**
- Roll Grinding and Corrugating. (Flour Mills.)**
Veatch & Co., L. R., Louisville, Ky.
- Rolled Metal Shapes. (For Building Material Manufacturers.)**
United States Metal Products Co., New York, N. Y.
- Rolls. (Bending and Straightening.)**
Bertsch & Co., Cambridge City, Ind.
- Roofers' and Tinner's Supplies.**
Merchant & Evans Co., Philadelphia, Pa.
- Roofing. (Contractors for Laying.)**
Dinisco & Bro., A., Pittsburg, Pa.
- Roofing. (Felt, Tar, Asbestos, Asphalt, Tin, etc.)**
Allen, Herbert F. L., Washington, D. C.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Armstrong Mfg. Co., Richmond, Va.
- Barber Asphalt Paving Co., Philadelphia, Pa.**
Barrett Mfg. Co., Philadelphia, Pa.
Bird & Son, F. W., East Walpole, Mass.
Cameron & Barkley Co., Charleston, S. C.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
John-Manville Co., H. W., New York, N. Y.
National Roofing Co., Tonawanda, N. Y.
Standard Paint Co., New York, N. Y.
Warren-Ehret Co., Philadelphia, Pa.
- Roofing. (Cement.)**
Carey Mfg. Co., Philippi, Cincinnati, O.
- Roofing. (Metal Shingles.)** [See Shingles, Metal.]
- Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.**
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., The, Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Roofing. (Slate.)**
East Bangor Consol. Slate Co., East Bangor, Pa.
Galt & Sons, John, New York, N. Y.
Genuine Bangor Slate Co., Bangor, Pa.
Hower, J. K., Slatings, Pa.
Johnson, E. J., New York, N. Y.
- Roofing and Siding. (Bird Sand and Chipped Slate Surfaced.)**
Birmingham & Seaman Co., Chicago, Ill.
- Roofing and Siding. (Flexible Cement, Bur-lap Inserted.)**
Birmingham & Seaman Co., Chicago, Ill.
- Roofing and Siding. (Metal.)**
American Rolling Mill Co., Middletown, O.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Cameron & Barkley Co., Charleston, S. C.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., The, Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.
New Orleans Rfg. & Metal Wks., New Orleans, La.
Tennessee Metal Culvert Co., Nashville, Tenn.
Youngstown Sheet & Tube Co., Youngstown, O.
- Rope.**
American Mfg. Co., New York, N. Y.
Broderick & Hanson Rope Co., St. Louis, Mo.
Columbian Rope Co., Auburn, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Turner Co., J. Spencer, New York, N. Y.
Whitlock Cordage Co., New York, N. Y.
- Rope. (Transmission and Hoisting.)**
American Mfg. Co., New York, N. Y.
American Steel & Wire Co., Chicago, Ill.
Broderick & Hanson Rope Co., St. Louis, Mo.
Caldwell & Son, Inc., W. E., Louisville, Ky.
Columbian Rope Co., Auburn, N. Y.
Dodge Manufacturing Co., Milwaukee, Ind.
Hunt Co., C. W., West New Brighton, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Whitlock Cordage Co., New York, N. Y.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Rope Drives.**
Caldwell & Son, Inc., W. E., Louisville, Ky.
Caldwell & Son, H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dodge Manufacturing Co., Milwaukee, Ind.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Rope Machinery.**
Haskell-Dawes Machine Co., Boston, Mass.
- Rubber Goods.**
Eureka Fire Hose Mfg. Co., New York, N. Y.
New Jersey Car Sp'g & Hub. Co., Jersey City, N. J.
- Rules. (Steel.)**
Larkin Rule Co., The, Saginaw, Mich.
Starrett Co., L. S., Athol, Mass.
- Safes and Vaults.**
York Safe & Lock Co., York, Pa.
- Safety Appliance. (For Elevator.)**
Roth Elevator Safety Co., Inc., Baltimore, Md.
- Sand.**
Arundel Sand & Gravel Co., Baltimore, Md.
Cassels Cement Gravel Co., Augusta, Ga.
Kirkpatrick Sand & Cem. Co., Birmingham, Ala.
Lathrop & Co., C. F., Richmond, Va.
- Sand Lime Brick Machinery.**
American Clay Machinery Co., The, Bucyrus, O.
- Sand Rammers.**
Chicago Pneumatic Tool Co., Chicago, Ill.
- Sap Stain Preventive.**
Church & Dwight Co., New York, N. Y.
- Sash Chain.**
Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.
- Saws.**
Gibbs Machinery Co., Columbia, S. C.
Huth Bros. Saw Mfg. Co., Rochester, N. Y.
Smith Machine Co., H. B., Smithville, N. J.
Sydney Pump & Well Co., Richmond, Va.
- Saws. (Band.)**
Smith Machine Co., H. B., Smithville, N. J.
- Saws. (Hack.)**
Starrett Co., L. S., Athol, Mass.
- Sawmill Logs.**
Soule Steam Feed Works, Meridian, Miss.
- Sawmills.**
Appomattox Iron Works, Petersburg, Va.
Gainesville Iron Works, Gainesville, Ga.
Vance & Co., J. A., Salem, N. C.
- Sawmill Machinery.**
Bailley-Lebby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Chase Turbine Mfg. Co., Orange, Mass.
Gibbs Machinery Co., Columbia, S. C.
Knight Mfg. Co., Canton, O.
Lane Mfg. Co., Montpelier, Vt.
Mecklenburg Iron Works, Charlotte, N. C.
Price Mch. Co., S. M., Norfolk, Va.
Schiffel's Sons Co., J. S., Macon, Ga.
Southern Engine & Boiler Works, Jackson, Tenn.
Sydney Pump & Well Co., Richmond, Va.
Union Iron Works Co., Selma, Ala.
Vance & Co., J. A., Salem, N. C.
- Saw Sharpeners.**
Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.
- Saw Sharpeners and Files. (Cotton Gln.)**
Carver Cotton Gln Co., East Bridgewater, Mass.
- Scales.**
Howe Scale Co., New York, N. Y.
Rouse Scale & Mfg. Co., Rome, Ga.
Standard Scale & Supply Co., Pittsburg, Pa.
- Screening Apparatus.**
Walker & Elliott, Wilmington, Del.
- Screens. (Fly, Window and Door.)**
New Jersey Wire Cloth Co., Trenton, N. J.
- Screens. (Mining.)**
Cresson Co., Geo. V., Philadelphia, Pa.
Erdle Performing Co., Rochester, N. Y.
Hendrick Mfg. Co., Carbondale, Pa.
Jeffrey Mfg. Co., Columbus, O.
Mundt & Sons, Charles, Jersey City, N. J.
McLanahan Stone Mach. Co., Hollidaysburg, Pa.
New Jersey Wire Cloth Co., Trenton, N. J.
Samson Bros., Milwaukee, Wis.
Waterloo Cement Mchry. Co., Waterloo, Iowa.
- Searchlights.**
Ft. Wayne Electric Works, Ft. Wayne, Ind.
- Separators. (Dust.)**
Buffalo Forge Co., Buffalo, N. Y.
Raymond Iron, Impact Pulv. Co., Chicago, Ill.
Savannah Blow Pipe Co., Savannah, Ga.
Skinner Bros., St. Louis, Mo.
- Sewer Pipe Machinery.**
American Clay Machinery Co., The, Bucyrus, O.
Tappin-Rice-Clark Co., Akron, O.
- Sewer Pipe. (Vitrified.)**
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Cincinnati Buffalo Co., Pittsburgh, Pa.
Pomona Terra-Cotta Co., Pomona, N. C.
Stevens Sons Co., H. M., Macon, Ga.
- Shades.**
Holophane Co., Newark, Ohio.
- Shafting. (Polished Steel.)**
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Jones & Laughlin Steel Co., Pittsburgh, Pa.
Republie Iron & Steel Co., Youngstown, O.
- Shafting Boxes.**
Hyatt Roller Bearing Co., Newark, N. J.
- Shafting. (See Pulleys, Shafting and Hangers.)**
- Shapes. (Rolled Steel, Brass and Bronze.)**
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- Sharpening Stones.**
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.
- Shears. (Metal.)**
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- Sheet Brass and Copper.**
Hussey & Co., C. G., Pittsburg, Pa.
Merchant & Evans Co., Philadelphia, Pa.
- Sheet Metal Working Machinery.**
Bliss Co., E. W., Brooklyn, N. Y.
- Sheet Steel and Iron.**
Allegheny Steel Co., Pittsburgh, Pa.
American Rolling Mill Co., Middletown, O.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Cincinnati Iron & Steel Co., Cincinnati, O.
La Belle Iron Works, Steubenville, O.
Republie Iron & Steel Co., Youngstown, O.
Tennessee Coal, Iron & R. R. Co., B'gh'm, Ala.
Wood Iron & Steel Co., Alton, Philadelphia, Pa.
Youngstown Sheet & Tube Co., The, Youngstown, O.
- Shingles. (Metal.)**
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Edwards Mfg. Co., Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Shipping Tugs.**
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- Shredders. (Bark, Chip, etc.)**
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- Signs. (Road, Street, Outdoor, Advt.)**
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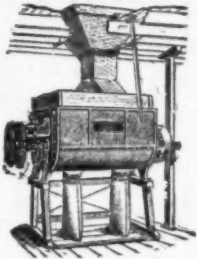
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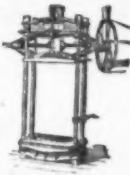
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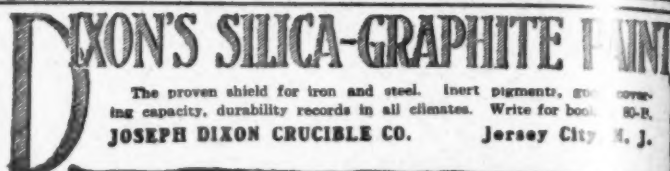
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